COMMERCE AMERICA

FORMERLY COMMERCE TODAY

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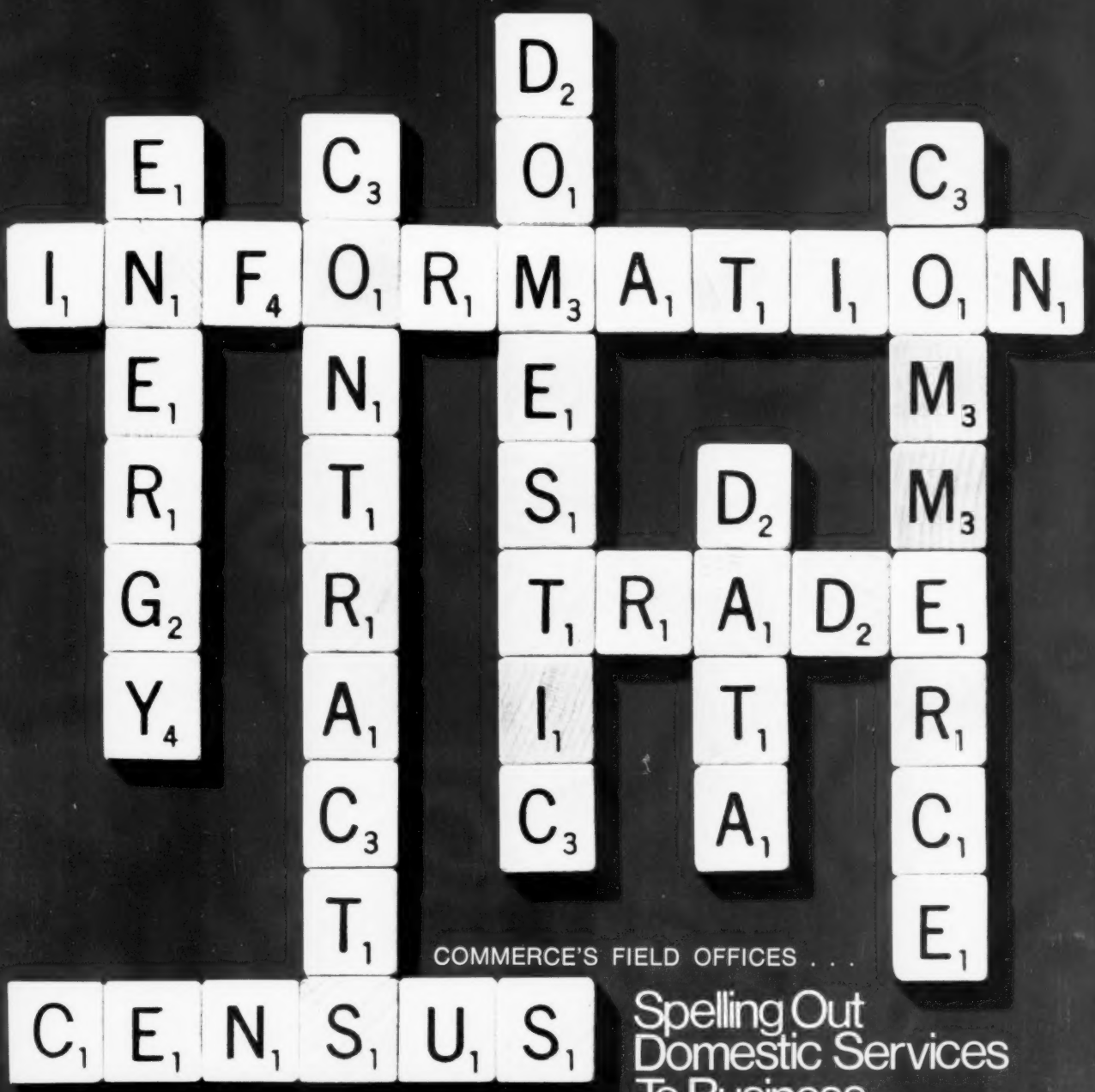

COMMERCE'S FIELD OFFICES . . .

Spelling Out Domestic Services To Business

Newsmemo

An Eximbank for Latin America? This was one of the proposals put before a Latin American Export Promotion Conference held last month in Caracas. Dr. Felipe Herrera, former head of the Inter-American Development Bank, was its author. He believes such an institution could build up the economic relationships between the countries of the Americas and the rest of the "Third World" developing nations. Under his proposal, the institution would provide export financing and export insurance either on its own or through existing means. A substantial part of the necessary resources, he believes, could be obtained from public international and Latin American capital markets.

Half Hour A Day For The U.S.A. That theme is a reminder to employees of the Alton Box Board Co., at Alton, Ill., and 50 other locations, to spend a few minutes keeping informed on public issues and transmitting their views to governmental and business leaders. "This idea is not new," explains company head Edwin J. Spiegel, Jr.; it is an effort to return to the kind of town-hall democracy that often gets swamped by the complexities in today's big government and big business. He also comments that "it is really too big a job for any company to tackle alone. We'd welcome the chance to talk with any organization that might be interested in using our ideas and materials."

The consumer who is determined to get satisfaction on an appliance complaint has been profiled. Such a complainant is middle aged, white, from the upper income and schooling levels, and lives outside central urban areas. The Major Appliance Consumer Action Panel, a unit that works with consumers and top industry authorities, has received this profile from an outside team that recently audited its work. The panel accepts it as a challenge to try to reach the low-income, less-educated central city consumer not now using its services. MACAP is supported by appliance makers and retailers as a last-resort aid to consumers who believe that dealers, service agencies or producing firms have not responded to their complaints.

Code authorities are widening their acceptance of plastic materials. Barriers to construction and industrial use continue to be removed. Plastic is found in telephone line conduits, agricultural irrigation pipe, water, utility and gas lines, sewers and drains, waste and vent pipes, and piping for industrial uses, all in competition with metals. Here's a growth index: 1965, 200 million pounds; 1970, 637 million pounds; 1973, 1.6 billion pounds. Most recently, shipments in May 1976 showed a 49 percent increase over May 1975.

The cost impact of mass production, in a nutshell: At their introduction in 1972, solid state electronic watches sold for $2,100. By January 1975 prices were down to $125, with a further decline six months later to $40. This January two semiconductor companies announced plans to market digital watches at $19.95 apiece. Currently semiconductor manufacturers predict solid state digital watches will fall in price below $10 before the end of the year, putting them in direct competition with the lowest-priced conventional watches.

The first instance of a U.S. industry—on a regional basis—seeking relief from import injury is now being considered. The Trade Act of 1974 opened the way for such regional appeals. The Western Concrete Reinforcing Steel Institute, noting that steel reinforcing bars from Japan, Taiwan and Korea are being imported into its West Coast markets at an accelerated rate (20 percent of market currently, against the customary 8 percent), is considering filing an import injury action with the International Trade Commission. The interesting aspect is that, on a national scale, the ratio of imported reinforcing bars to apparent consumption was 4.8 percent in the first half of 1976, compared with 9.1 percent in 1974 and 3.8 percent in 1975.

Apparel retailers are looking for a revival of consumer interest this fall. Prices for spring and summer apparel were up 10-15 percent this year and consumer resistance was encountered. Sales were sluggish despite widespread promotions and earlier-than-normal clearance events. Stimulus is expected from the traditionally heavily-promoted fall fashions and back-to-school items, but the price tags will again show 10-15 percent increases.

COMMERCE AMERICA
FORMERLY COMMERCE TODAY

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COVER: A few of the helpful services which the Department of Commerce's nationwide field offices offer American business and industry are spelled out Scrabble-fashion. The story beginning on page 4 details how these services are being used and how they can assist business executives who may not already be aware of them.

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ECONOMIC HIGHLIGHTS

Patterns Of Productivity, Costs And Prices In The Business Cycle

This Economic Highlights by John W. Kendrick, Chief Economist of the Department of Commerce, is his second on productivity.

John W. Kendrick

There are some interesting differences between the pattern of changes in productivity and related factors in the current business cycle and the typical pattern in previous cycles. An examination of these differences, as well as the similarities, provides some clues to the probable changes in productivity, costs and prices over the next several quarters.

Productivity plays a key role in the business cycle. As discussed previously *(Economic Highlights, August 2)*, increases in productivity, defined here as output per hour, are in effect deducted from increases in average hourly compensation in computing changes in labor cost per unit of output. Thus, between 1966 and 1973, average hourly labor compensation rose at a 6.9 percent rate, output per hour at 2.1 percent, so that unit labor costs increased at an average annual rate of about 4.7 percent in the private domestic economy. Since unit labor cost is the major component of price, the two variables show similar changes over the long run. Over shorter, cyclical periods, however, they tend to diverge, indicating contraction or expansion of profits (and other nonlabor charges). This cost-price relationship is a key element in the cycle, since the profit residual is of basic importance in motivating and financing business investment—a major determinant of total final demand and thus of economic activity generally.

In the latter phase of expansion, productivity growth typically slows down as an increasing proportion of industries are operating at or beyond the most efficient rates of utilization of capacity. At the same time, average hourly earnings accelerate, reflecting tight labor markets and more overtime. At some point, unit labor costs accelerate more than prices, squeezing profits prior to the cycle peak, and causing investment plans and commitments to be cut back, a major factor in bringing on the contraction.

For much of the contraction, unit labor costs continue to increase more than prices, and profits continue to drop. But, prior to a cyclical trough, the rate of productivity changes bottoms out, as managers lay off unneeded workers, concentrate production in more efficient plants, and otherwise reduce costs. At the same time, increases in average hourly labor compensation decelerate, as overtime is reduced, and new labor agreements involve smaller wage increases, reflecting falling demand and rising unemployment. As a result, unit labor costs rise less than prices in the final phase of a contraction, helping to widen profit margins, and increase investment commitments and new orders. This sets the stage for recovery. For at least the first year, productivity rises at above average rates as capacity utilization rates rise toward optimal levels. It is usually some time later before unit labor costs begin putting upward pressure on prices again, which is where we began the cycle story.

Cycles since World War II have conformed quite well to the summary description given above, which was first developed by Wesley C. Mitchell. Looking at the 1973-75 contraction, the decline in productivity changes in the business sector bottomed out two quarters after the peak (in fourth quarter 1973) as in prior cycles, but then increased one quarter before the trough (panel A). But, average hourly compensation continued to rise up to the trough, in contrast to a decline in prior contractions (panel B). This was attributable to efforts by labor to catch up with the double-digit inflation of 1973-74, which was unique to the recent cycle. As a result, unit labor cost changes dropped only one quarter before the trough of early 1975, instead of several quarters earlier as in prior cycles (panel C).

Similarly, price inflation accelerated during the recent contraction instead of declining (panel D). As a consequence, the ratio of price to unit labor cost began to rise one quarter before the trough of 1975, instead of sooner as in earlier cycles (panel E). This was reflected in an increase in unit nonlabor costs (indicating unit profit changes) one quarter before the early 1975 trough, instead of the two-quarter lead of prior contractions (panel F).

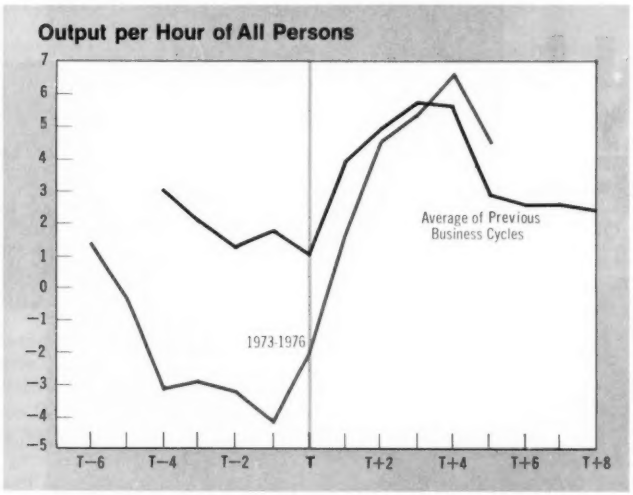
During the 1975-76 expansion, productivity changes rose smartly for four quarters after the trough, instead of for three quarters (panel A). And even the increase of 4.5 percent in the second quarter of 1976 was still far above the 1947-76 trend-rate of less than 3 percent. Increases in average hourly labor compensation, instead of rising after the trough, fell for four quarters from a much higher rate than in earlier troughs, before appearing to level out in the second quarter of 1976 (panel B). As a result, unit labor cost increases decelerated much more sharply for four quarters after the early 1975 trough than in earlier expansions (panel C), and by early 1976 were only one percentage point above earlier average rates of increase. In both cases, they accelerated somewhat in the fifth quarter. Note also that price inflation decelerated sharply during the first year of recent recovery, from 12-13 percent down to about 5 percent, whereas in earlier expansions, after one quarter inflation had accelerated to almost 4 percent by the fifth quarter (panel D).

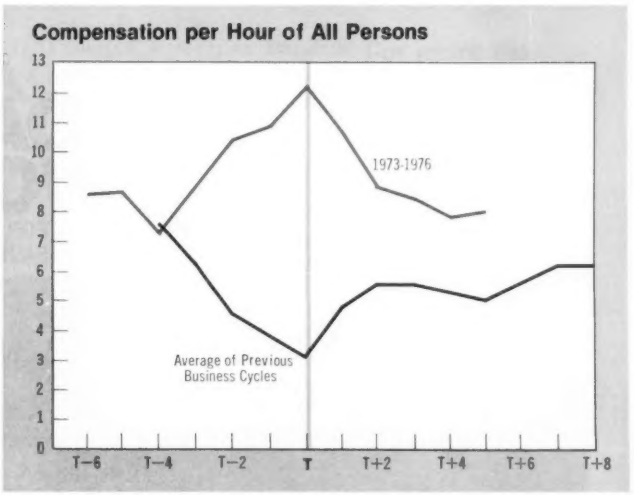
The ratio of price to unit labor cost spurted much faster for two quarters after the 1975 trough, than in earlier expansions, when the ratio went up for four quarters (panel E). But, by the fifth quarter, both ratios had decelerated to about a 1½ percent increase, with unit nonlabor costs rising at about an 8 percent rate (panel F).

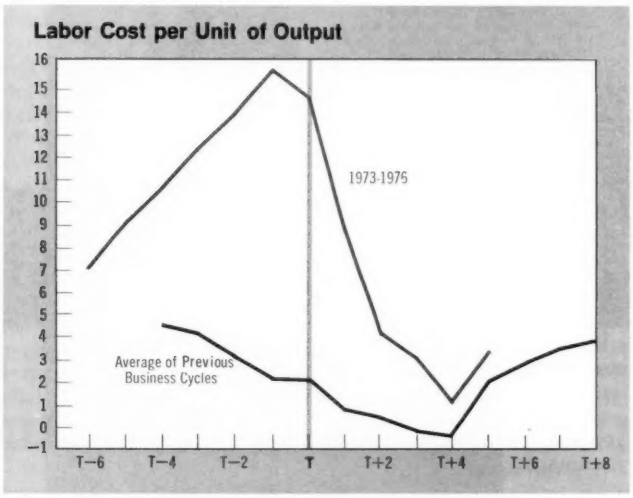
It is quite possible that productivity will continue to rise at above-average rates because there are still larger reserves of unutilized plant and labor than is usual after 1½ years of recovery. For the same reason, increases in average hourly earnings are unlikely to accelerate significantly. Under these conditions, rates of increase in unit labor costs should not rise much, and average price increases may continue at around their recent levels. Nevertheless, if past patterns prevail, there would still be a downward tendency in the ratio of price to unit labor cost, and in unit nonlabor costs (including profits), as shown in panels E and F. Even so, rising volume would still produce further increases in total profits, with favorable implications for continued growth of business capital outlays.

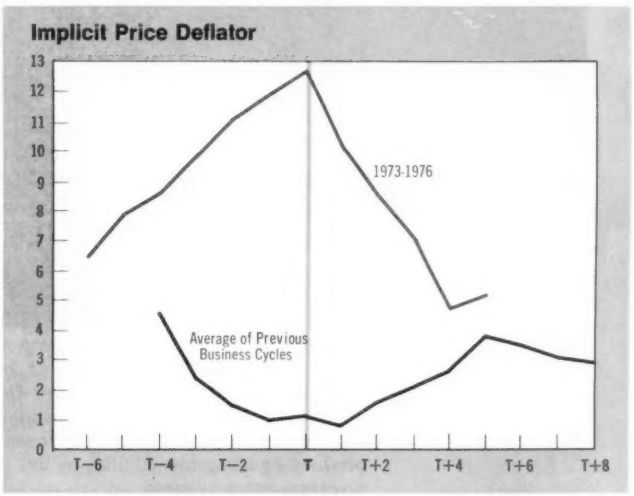
PRODUCTIVITY, COSTS, AND PRICES in the U.S. Private Business Economy during Contraction and Recovery.

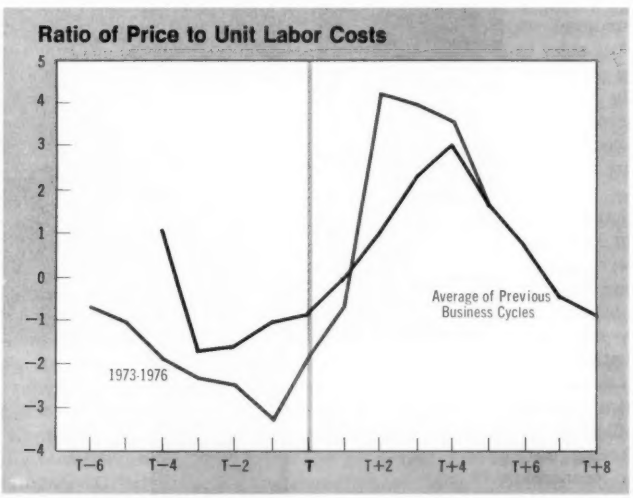
[Percent changes over same quarter of previous year.]

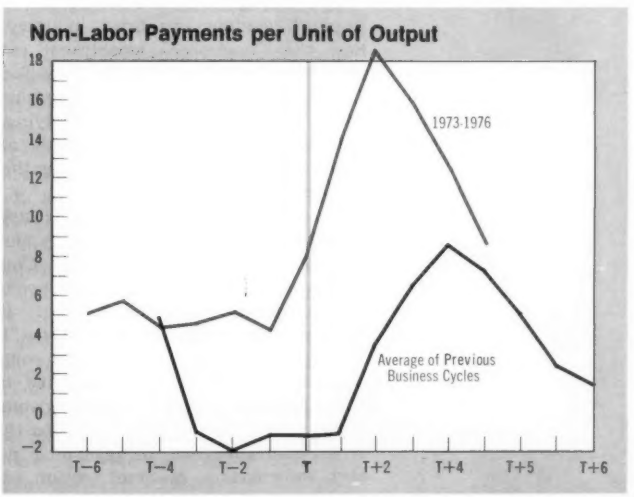












T = Trough Quarter

SOURCE: U.S. Bureau of Labor Statistics

ALL IN A DAY'S WORK

COMMERCE FIELD OFFICES ANSWER BUSINESS NEEDS

Versatility is a primary characteristic of the Commerce district offices, as business executives around the country are discovering.

The Memphis office has assisted a local manufacturer of electronic alarm systems to register its product and become eligible to bid on government procurement contracts.

In Boston, the district office has held a series of in-plant seminars to brief industry personnel on how the Commerce Department may be able to help them solve some of their marketing problems.

The Denver office found an unusually high interest among Coloradans in applying for patents—and drew nearly 350 participants at two how-to-do-it seminars which it put together in response to the unexpected demand.

These activities may surprise many executives who have been in business for a number of years, and have come to think that Commerce's field offices spend most of their time promoting exports. Today, with many other areas of vital interest to American business, the field offices have expanded their priorities to stress energy conservation, government procurement, productivity, material shortages, business security and consumerism, among other things. This is in addition to the offices' more traditional functions of providing marketing data and information on metrication, area economic analyses, and industrial trends and projections.

A less publicized but highly important activity

of the district offices is their responsibility for industrial mobilization in times of national emergencies, the defense materials/priorities system and the training programs of the National Defense Executive Reservists.

Commerce's 43 district offices, listed on the inside back cover, are supported by 20 satellite offices in major industrial and commercial centers throughout the United States and Puerto Rico.

For more than 60 years the Commerce offices have worked to improve the rate and quality of U.S. economic growth and to enhance the competitive position of American goods in world markets.

Field office trade specialists are well versed in both the domestic and international programs of the Department which, through private consultations, conferences, seminars and in-plant workshops, are provided to the business communities of their respective districts.

The district offices and their satellite offices are administered and guided by the Office of Field Operations in Washington, where coordination with other Department resources is carried out.

For instance, the Office of Ombudsman, in the Bureau of Domestic Commerce, works closely with the district offices to register complaints, file opinions, and provide input to Commerce policies as they are being formed.

Each district office maintains an extensive business reference library of government and private sector reports, publications, periodicals and other basic reference sources that enable the business community to undertake, on the spot, major research in a broad variety of business fields.

In addition, each office has direct access to a collective base of knowledge represented by some 150 industry analysts in the Bureau of Domestic Commerce. That staff provides "coverage" of 325 manufacturing and 222 wholesale/retail business and service trades—about 90 percent of those classified in the Standard Industrial Classification Manual (SIC).

In furthering Commerce's energy conservation program, district office personnel show film and slide presentations (viewed by more than 100,000 in the past year), hold seminars, and visit plants to suggest energy-saving improvements. They also supplement the efforts of the National Bureau of Standards to promote awareness and utilization by business and industry of its energy technology, and such other programs as household appliance labeling, conversion to metric, materials flammability and U.S. standards.

With guidance from the Memphis District Office, a number of firms in that area have made use of Commerce's energy conservation materials. Louisville's American Telephone & Telegraph Company has scheduled 14 showings of Commerce's energy film, and held seven energy conservation seminars. All Kentucky AT&T employees, and some of their family members, were exposed to the program.

Memphis District Office personnel have also worked closely with the Memphis Light, Gas and Water Division, which has been a major user of Commerce's EPIC (Energy Conservation Program Guide for Industry and Commerce) Handbook, a compilation of energy-saving programs instituted by some 50 firms around the country.

Following contact by the Birmingham District Office, the Alabama Power Company has shown the energy film to all its employees, and the Mississippi Power and Light Company responded in a similar manner to the Jackson Satellite Office.

The Boston District Office has concentrated on holding in-plant seminars. Built around the theme of "Would You Like To Borrow the Department of Commerce For a Couple of Hours?," the seminars inform industry of what services Commerce offers, and which one would be of most value to the individual firms. The trade specialists emphasize the wealth of Commerce literature available, such as the *U.S. Industrial Outlook*, Census Bureau publications, the *Commerce Business Daily* and various commodity and industrial quarterly reports. Since May, the district office has scheduled eight in-plant seminars, and hopes to put on 100 in the next year.

The district offices are the activists in a new cooperative program between Commerce and the General Services Administration (GSA), aimed at locating new suppliers for government procurement. According to Commerce/GSA predictions, the new sources of supply are expected to:

- increase competition and lead to lower prices and a consequent saving of tax dollars;
- expand the government's procurement base, which could be vitally important in a national emergency; and
- bring about a more even distribution of the federal procurement dollar.

In carrying out this program, GSA will supply Commerce with a list of items which are purchased on a repeat basis, on which few bids were received in the most recent procurement, and for which the latest contract exceeded $50,000. Commerce district offices will then try to locate new sources for GSA procurement by announcing the program at trade seminars and procurement conferences, and in their newsletters.

As a means of bringing this program to the attention of business, Commerec district offices conduct Business Development Conferences. These are sponsored by members of Congress, held in the member's district, and include representatives of other appropriate government agencies.

The one-day conferences provide local business executives the opportunity to meet, on a person-to-person basis, specialists from civilian and military government agencies as well as federal contractors. They provide advice on the federal procurement and contracting process, government aids and services to business, opportunities to sell to prime contractors, and export opportunities.

In the area of minority business, directors and some staff members provide marketing and statistical information on opportunities for the minority business community and contractors.

To complement and multiply the efforts of the

For more than 60 years . . . they have worked to improve the rate of U.S. economic growth and the competitive position of American goods . . .

district offices, Commerce has designated more than 850 Chambers of Commerce, world trade clubs and other types of business-oriented organizations as associate offices. Their assistance is voluntary and without cost to the Commerce Department. The program has been in operation since 1913.

. . . expansion into export markets provides a more stable marketing base, expanded job opportunities and increased profits.

The Pittsburgh District Office has begun a cooperative effort with more than 30 local chambers of commerce to reach the business community. The district office uses the chambers' membership lists to send out information on its services—hand-tailored to suit the particular size and location. Staff members also brief Chamber of Commerce board members on how to use Department of Commerce services.

Pittsburgh District Office Director Newton Heston, Jr., describes the information offered by the field offices as being culled from three sources: first, Commerce printed material, easily available to anyone; second, the information stored in Commerce Department files, both in headquarters and in the field; finally, the information filed in the heads of the Commerce staff, based on their years of experience.

According to Heston, "Everyone wants different information, for their different purposes. It's not possible to print or even gather the data to answer each individual need. So we talk with the business executive about what specific material might be helpful and how to adapt the available material to fit the particular situation."

Recently, the Pittsburgh office was approached by a Western Pennsylvania manufacturing company, an employer of 1,000-1,500 workers, that was considering an investment of several million dollars in capital equipment. They were conducting a market study to determine the future for their product, both domestically and world-wide. This involved checking the trends of current and potential customers' businesses. The district office provided counseling, informing them of what data was available from Commerce, and where they could obtain additional secondary information.

District offices have also established close relationships with their counterparts in the states, to provide better service to local business communities and eliminate duplicate programs.

The Denver District Office was receiving as many as 1,200 calls in a year seeking information on obtaining patents. In response to this obvious need (Colorado ranks 18th among the states in the number of patents issued), the office scheduled a series of seminars on "How To Obtain and Market a U.S. Patent." The seminars featured patent attorneys, a successful local inventor, and district office staff. Just under 200 people attended the first seminar, and 135 came to a follow-up meeting.

The office also met another community need by offering seminars on "How To Avoid Bankruptcy." By working with the Referee in Bankruptcy of the U.S. District Court, the district office tried to reduce the unusually high number of business firms contemplating bankruptcy.

The Denver District Office has joined with the Small Business Administration to offer biweekly seminars at which people considering business ventures are given on-the-spot assistance.

Field offices participate in the continuing series of census user conferences conducted by the Bureau of the Census. And they distribute instructional materials dealing with metric conversion for the National Bureau of Standards.

The Memphis District Office has furnished Census Bureau data to such companies as Harland Bartholomew & Associates, an engineering firm that required boundary and classification information on Standard Metropolitan Statistical Areas. Ernst & Ernst, certified public accountants, used Census data in preparing a feasibility study for the expansion of a Memphis children's hospital, and the Memphis Housing Authority received help in setting up an energy conservation program for its housing units.

The Louisville Gas & Electric Company has served as a multiplier for Commerce services and programs. The company displayed Commerce's metric exhibit in its downtown office, and also at a major home builders trade show attended by thousands at the Louisville Exhibition Center.

Commerce has traditionally conducted an export expansion program to benefit both the participating business firms and the national economy. For the companies, successful expansion into export markets provides a more stable marketing base, expanded job opportunities and increased profits. On the national scene, expanded exports contribute positively to the U.S. balance of trade.

Among the export programs the field offices participate in, some new and some well established, are:

- providing marketing data and counseling services;
- encouraging firms to enter exporting;
- identifying trade opportunities and new markets for established exporters;
- assisting qualified foreign buyers in the purchase of domestic goods in the United States.
- stimulating East-West trade; and
- using local multiplier agencies as leverage vehicles for export trade expansion.

Specific exporting activities include the Target Industry Program, the Agent/Distributor Service, World Traders Data Reports, the American International Traders Register, TOP (Trade Opportunity Program), overseas trade shows, fairs, trade center promotions, and trade missions.

In addition, Commerce offices provide:

—primary contact locally for all Commerce agencies, including Bureau of the Census, Office of Industrial Mobilization, Patent and Trademark Office, National Bureau of Standards, National Technical Information Service, and the United States Travel Service;

—publications of the Government Printing Office;

—Census Bureau data and publications; and

—other Commerce publications, including retail and wholesale *Data Sources for Market Analysis, Construction Review, Measuring Markets* and others.

Field office personnel also inform local businessmen and women about the services of Commerce's Ombudsman, alert the Department to critical shortages of material, and assist in obtaining platforms for Departmental spokesmen and women.

Domestically or internationally, Commerce field offices are responsive to the increasing demands from industry at the local level, and provide feedback to the Department of Commerce on concerns of the business community. ☆

ENERGY SAVING
AT THE GRASS ROOTS

AMERICAN INGENUITY SCORES AGAIN

With the disappearance of summer and the approach of cold weather, Hobart, Indiana, a city of about 25,000 population 40 miles from Chicago, is undertaking an energy conservation program that will reach all its citizens. Such concerted efforts are happening all over the country as local governments attempt to solve, often with Federal Government and local industry's help, their growing energy problems.

Hobart launched a campaign lasting five weeks to alert its citizens to the need for conserving energy. The campaign featured a pledge sheet which householders were asked to complete. The campaign managers reported that nearly 1,000 pledge sheets were submitted.

Those filling out the pledge sheets promised voluntarily to conserve energy at their residences, businesses, and in the use of their cars in the following ways: by insulating attics and walls, adding storm windows and doors, caulking all air cracks, and using insulated siding; controlling thermostat temperature by setting it at 65 degrees at night, 68 to 70 degrees in daytime, lowering it when away from home for extended periods, cleaning furnace filters and changing them regularly; conducting a home energy audit to determine consumption and areas of waste; and practicing good driving habits and car care.

'Everybody wins'

Weekly drawings at random were taken from those turning in pledge sheets, and prizes consisting of $25 savings bonds and merchandise awarded to the winners. Posters were printed and displayed at local businesses, and red, white, and blue city

Many communities have relaxed conservation drives . . . in others a strong basic effort is still going on.

decals were given free to all pledge signers. Thousands of bumper stickers with energy messages were placed on cars. The slogan of the campaign was "Everybody can be a winner."

The Hobart campaign was organized and carried out by an energy conservation board headed by Arthur W. Padish, a Hobart citizen who presented the conservation plan to Mayor Calvin E. Green, Jr., soon after he assumed office last January 1. Green said he felt the campaign had been very successful. He added that industrial establishments in the area had carried out energy conservation programs of their own.

With citizens made energy conscious by the publicity campaign, the next step was to put a specific program into effect. The local board turned the job over to the Hobart Jaycees, who volunteered to accept the challenge. The Jaycees, consisting of 160 men, are undertaking to make the conservation program a reality. Robert Hunt, president of the Jaycees, says that, although stumbling blocks have been encountered, he still hopes to win the cooperation of all citizens.

The Hobart experience is one of many efforts under way in communities throughout the nation to face up to the inevitable so far as energy supply is concerned. A growing number of citizens are aware that the energy prospect in the United States is for increasing shortages, rising prices, and growing reliance on foreign sources . . . . except to the extent that this can be offset by conservation measures in home, community, and industry, and development of new and greater energy sources at home.

Many communities have relaxed in some measure their conservation drives since the first big energy pinch gripped the country in 1973. But in many others a strong basic effort to save energy is still going on. Hobart is an example of a community still aware that the energy crunch is permanent.

The following examples are only a few of the other communities, large and small, that are active in conducting programs to save energy.

Chicago: The Greater Chicago Committee to Use Energy Wisely, which has a wide representation from governmental, industrial, educational, trade and professional groups, maintains a program to encourage the wise use of energy resources, and has a "Use Energy Wisely Week" in October in which awards are presented for the wise use of energy resources.

Special emphasis is placed on motivating citizens to do something for themselves, with specific suggestions about the benefits of conservation and what to do and how to get assistance.

H. Wallace Poston, Commissioner of the Department of Environmental Control of the City of Chicago, who first proposed the energy conservation program and serves as chairman of the committee, feels that the group is getting the conservation message across to at least some of the citizens of the area, although he points out that any movement will lose steam if there is no national emergency to urge it on. He feels that the pressure to save energy will be greater in the future.

Examples of energy savings made in Chicago include: University of Chicago, Joseph Regenstein Library, $76,266 in energy program benefits from reducing electric usage 2,230,720 KWH annually and natural gas, 97,349 Therms annually; IBM Building, 46 percent reduction in energy usage in an all-electric building; and People's Gas Light and Coke Co. Office Building, $93,400 energy program benefits from reducing electric usage 2,533,600 KWH annually and natural gas 47,855 Therms annually.

Nassau County, N.Y.: Worried about possible energy shortages, Nassau County started an energy conservation program in July 1973, several months before the oil embargo brought the energy crisis home to all Americans. The county made a profile of its buildings, conducted a consumption monitoring program, and set up a control system.

A conservation coordinator was named. The conservation effort was extended to every work area. People in each area were directed to report to the conservation coordinator. An inspection system was established, checks were made on meters.

Richard T. Rocchio, Director of the Bureau of Energy Resources of the county Department of General Services, says that in 1974 energy consumption in county buildings was reduced about 24 percent below 1973, and thus far in 1976 consumption is about 8.5 percent less than in 1975.

In the last year and a half, the County's Bureau of Energy Resources has begun extending its conservation efforts to the public and to local industry.

About 50,000 copies of an "Energy Tips" booklet have been distributed to the public. Ideas for saving energy have been published in local newspapers. An energy fair is being held in which 35 to 40 exhibitors will provide instruction on how to save energy. A miniature house is being erected in which energy-saving tips will be demonstrated. A panel of consulting engineers will be available to tell home owners how to save energy.

The Bureau also is operating an Econo-Van which tests automobiles free of charge to see if they are using gasoline inefficiently, and how they can cut down on gas use.

"We first appealed to people to save energy and save the country," Rocchio says. "That didn't work so well. Then we told them that if they saved energy they would save money. That worked better. People usually will listen if you can show them how they can save money."

Chautauqua County, N.Y.: Chautauqua County has an independent energy conservation program aside from participating in the joint Federal-State Home Energy Savers' program sponsored by the Federal Energy Administration (FEA).

The program features: a plan to reduce lighting 40 to 50 percent in schools, the community college, and industrial facilities, particularly where lighting had been excessive; development of housing codes with emphasis on insulation and lighting that would be adequate but not excessive; a booklet containing information on saving energy; establishment of information centers in Dunkirk and Jamestown; a questionnaire dealing with energy conservation that students can take home to their parents.

Ten states are participating in the FEA program. Major features of this program include a "hot line" on which citizens can call for information about saving energy, a home retrofit "How To"

course, and a Home Energy Savers' Workbook.

Fairfax County, Va.: Early in 1973, Fairfax County, located near the nation's capital, initiated an energy conservation program that encompassed a wide variety of operations including: conversion of heating plants to No. 5 fuel from No. 2 fuel; reducing the size of vehicles in use; continued monitoring of vehicle and heating plant operational efficiency; reduction in energy requirements by way of staggered work hours, carpooling, four-day weeks, and other measures; vehicle speed at no more than 50 miles per hour except for emergency calls, and other means for saving fuel in vehicles; stopping the use of school buses to carry spectators to athletic events; and many other steps designed to conserve energy.

Gary W. Blanchard, of the county's Energy Management and Monitoring Staff, says the energy saving program is still under way except that some of the emergency actions such as cancellation of spectator busing have been relaxed. The county estimates that it achieved in 1974 a 35 percent reduction in average gallons of No. 2 heating fuel consumed per degree day; a 29 percent reduction in average gallons of No. 4 heating fuel, and a 14 percent cut in average gallons of No. 5 heating fuel.

Jacksonville, Fla.: For the last 18 months, Jacksonville has been carrying on an energy conservation program in which teams of specialists undertake to help local people with energy saving efforts. The teams visit homes and recently have extended the visits to commercial and industrial establishments.

Harry Kimball, project manager of the Mayor's Energy Office, says thus far about 300 homes have been visited. A survey, he adds, indicates that the home visits have resulted in an average energy saving for each home of about 17 percent.

"We do not go from door to door," Kimball explains. "But we send teams to places that request the service, which is free."

In addition, the teams visit homes where the householder has complained of high energy bills. In the home visits, an energy analyst inspects the premises to determine where insulation would be helpful, while a home economist explains to the housewife or householder how energy could be saved by keeping the indoor temperature at 68 to 70 degrees in winter and allowing it to go to 78 or 80 degrees in summer; setting the hot water heater at around 130 degrees; using small appliances and utensils for cooking; using a bottle warmer for the baby's bottle, etc.

The energy office receives free television and radio time in Jacksonville, Kimball says, to explain energy conservation techniques. These have resulted in numerous phone calls to the office by people interested in saving energy. Word of the Jacksonville program has gone far and wide, with the result, Kimball says, that more than 50 communities scattered about the country have asked about the program, and have been given packets of information explaining it.

Tulsa, Okla.: Tulsa, which has a population of 350,000, is saving energy in the operation of its city government.

Mayor Robert J. LaFortune says that three years ago Tulsa adopted the following program to conserve energy so far as its own departments are concerned: overnight privileges were taken from city cars except those subject to being called out for emergency service; allocations of gasoline and diesel fuel were adopted for each city operating department; emphasis was placed on the use of diesel rather than gasoline-using equipment in new purchases of fire trucks, etc.; literature was sent out to several hundred companies encouraging car pooling.

"People usually will listen if you can show them how they can save money."

LaFortune adds that in the last four years Tulsa has doubled its transit service and has assumed greater responsibility for subsidizing mass transit. In 1976 the city is devoting $900,000 of general funds to its mass transit system.

He says that for three years Tulsa has lived with the same state-approved allocation of gasoline and diesel fuel: 160,000 gallons per month of gasoline and about 10,000 gallons a month of diesel fuel.

"The allocation," he observes, "is beginning to strain. In the last year, we have added 100 new police officers, and police cars use a lot of gas."

Phoenix, Ariz.: The city of Phoenix in recent years has conducted an extensive energy conservation program in which an effort has been made to plug all the leaks in energy use by city services.

Ronald W. Jensen, Maintenance Services Director, explains that since energy conservation efforts were begun in 1973, substantial savings have been made in the use of natural gas, electricity, and automotive fuel. The savings, he adds, have been due in part to the active involvement of city employees as well as accomplishments on specific energy reduction projects.

New building designs in Phoenix are expected to be superior to any constructed in the past so far as energy efficiency is concerned. The city plans to continue to purchase smaller autos and pickup trucks as the older and larger ones wear out and are replaced. A consulting engineering firm has been hired to assist in making recommendations on the feasibility of converting refuse into energy.

San Diego, Calif.: The city of San Diego has developed an energy conservation program focused on internal city operations.

Currently, San Diego's conservation operations include: a contract with a consultant to review the possible use of solar energy in new construction and in retrofitting existing buildings; a solar-heated municipal swimming pool; lighting and heating standards have been established for city buildings; a driver education program is being conducted for some sanitation workers so that they may act as a control group; automated fuel dispensing equipment has been installed; street lighting requirements are being reconsidered; each department has implemented conservation measures.

Seattle, Wash.: The city of Seattle discovered that it could save up to 42 percent of the energy costs in downtown office buildings during the winter simply by turning down thermostats and hot water temperatures, turning off unnecessary lights and turning off the heating system on weekends.

These are only a few of the bright spots in the nation's energy conservation effort. But for those countless homes, factories and communities where thermostats have not yet been lowered, the question might reasonably be asked, why? ☆

Energy Digest

QUADRILLIONS? . . . The U.S. Geological Survey is probing Appalachia's black shale deposits for natural gas deposits that may range as high as several quadrillion cubic feet. Devonian shales underlie an area of roughly 150,000 square miles between the Appalachian Mountains, the Mississippi River, New York and Tennessee. The shales remain untapped because they cannot be developed with current technology. Laboratory data indicate that by a technique called pyrolysis the Devonian shale formation would yield about 1,000 to 2,000 cubic feet of gas per ton of shale. The total volume of gas in the shale formations is unknown, but estimates range from 150 trillion to quadrillions of cubic feet. According to some data, the Devonian black shale in the Appalachian basin may have a total recoverable natural gas resource of about 220 trillion cubic feet. This volume is about six times larger than the 36 trillion cubic feet of gas produced from all known reservoir rocks in Appalachia since drilling of the first gas well in 1921.

SOLAR DRYERS . . . The Energy Research and Development Administration Solar Industrial Process Heat Program is trying to determine which industrial processes are best suited to the use of solar technology as a replacement for fossil fuels. Accordingly, the agency has signed contracts totaling over $1 million with six organizations to design solar systems for drying lumber, onions, textiles, soybeans, alfalfa, raisins and prunes. The six were selected from 24 that submitted proposals. The designs are to be completed by next spring, when the two or three most promising will be selected for construction and operation.

READIN', WRITIN' AND ENERGY . . . The University of California at Berkeley is offering three-day energy courses for professionals in urban, regional, and environmental planning as part of its Summer Institute in Environmental Planning and Design. Courses are being offered in: Energy Conservation in Architecture & Planning and Energy Policy & Urban Growth. Contact Glen Harris, University Extension, University of California, 2223 Fulton St., Berkeley, Cal. 94720. (415-642-4811).

ELECTRIC CAR BREAKTHROUGH? . . . The electric car may not be as remote a possibility as it has generally been considered if ERDA-sponsored research succeeds in developing a powerful new battery which space technology has made theoretically possible. The new battery could store about 20 times more energy for its size and weight than present-day car batteries. A method of harnessing water and lithium—normally incompatible—to make such a battery was discovered by engineers at Lockheed Missiles and Space Company. An electric auto powered with such a battery could perform comparably to today's compact, gasoline-fueled cars, according to preliminary calculations. Operating costs now appear to be about two or three times greater, but researchers feel they could be reduced with further development.

BRIDGE PRESERVER . . . The Federal Highway Administration's Division of Special Projects has made what is believed to be the first installation of a solar electric system for cathodic protection of a bridge deck, at an expected saving of more than $10,000 compared with the cost of running a power line to the site. Solarex Corp. of Rockville, Maryland, manufactured the system, which produces 90 watts (peak) power to deliver the electricity necessary to protect the reinforcing rods in the bridge deck from corroding. Excess energy produced by the solar array is stored in a battery to provide electricity to the structure during darkness. The solar cells are silicon photovoltaic devices which convert sunlight directly into electricity. Solarex reports that the systems are extremely reliable and are virtually maintenance-free. Furthermore, they are absolutely quiet and pollution-free, as they have no moving parts and need no fuel.

GETTING DOWN TO SPECIFICS . . . ERDA has published the second volume of its national plan for energy research, describing in detail all of the agency's energy projects and those of all other federal units. Free copies of Vol. 2, A National Plan for Energy Research, Development and Demonstration: Creating Choices for the Future, are available from the Technical Information Center, Oak Ridge Operations Office, ERDA, Box 62, Oak Ridge, Tenn. 37830. Vol. 1 dealt with conservation technologies and outlined R&D priorities.

FIFTEEN PERCENT CUTBACK . . . Mobil Oil Corporation reports that it has reduced energy consumption in its U.S. refineries by 15 percent since 1972. A company spokesman said Mobil's conservation efforts last year saved 2.5 million barrels of crude oil that would have had to be imported into the country. This was 8.7 percent below the previous year's consumption.

Despite Snag, Synthetic Fuels Have High Priority

TASK FORCE REPORT CALLS FOR PRIVATE DEVELOPMENT, WITH FEDERAL INCENTIVES TO INVESTMENT

Despite a checkered career involving several unexpected setbacks, the commercial development of synthetic fuels as an alternative to rapidly diminishing fossil fuels still has high priority among energy planners.

Authorization to guarantee loans for projects seeking to develop synthetic fuels was deleted from the Energy Research and Development Agency's budget last December, but the agency expects Congress to reconsider synthetic fuels legislation this year and is anxious to move ahead with its development.

The need becomes more obvious and pressing every day. Domestic production of oil and natural gas has been declining since the early 1970s, and unless present trends are reversed U.S. dependence on foreign sources will be even greater.

In his 1975 State-of-the-Union Message, President Ford called for accelerated development of the nation's energy technology and resources, and proposed a set of comprehensive energy supply and conservation measures to reduce import requirements for foreign oil to about four million barrels per day by 1985.

As an important element of this 1985 program, the President proposed a National Synthetic Fuels Commercialization Program producing the equivalent of one million barrels per day of synthetic fuels by 1985. Such a program, in which the Federal Government would provide suitable financial or other incentives, would stimulate investment in a number of commercial plants to convert coal, oil shale and solid waste into clean oil and gas.

An Interagency Task Force was formed to develop means of reaching the President's goal. Its four-volume report, issued last January, stated that "Although the development of Alaskan and Outer Continental Shelf oil and gas, improved energy conservation, expansion of nuclear power facilities, and greater direct burning of coal can buy time, our dependence on foreign sources of oil and gas will continue to grow after 1990 if synthetic fuels are not produced in substantial quantities."

The Task Force found a number of serious impediments to exclusively private commercialization of synthetic fuels. The uncertainty of the future price of world oil is perhaps the most important factor discouraging private investment. If world oil prices were to fall substantially, large plant investments could not be paid off from revenues of low price, but high cost, synthetic fuels. In addition to the financial risk, there are numerous environmental uncertainties, regulations that must be met, and uncertainties concerning the adequacy of available labor and materials. Federal Government involvement is needed to overcome these uncertainties.

The Task Force examined a variety of possible Federal incentives, including tax changes (investment tax credits, construction expensing and accelerated depreciation) and government-owned management structures. Its final recommendations included:

Non-recourse guaranteed loans for part of project costs under which:

- Government guarantees payment of principal and interest for loan funded in the private sector;
- Covers only capital costs before startup;
- Government would not recover losses—in the event of failure—from the corporation, although it would recover assets of the project;
- Limited to a maximum of 75 percent of the cost. Industry will be required to invest substantial amounts of their capital and share the risks;

Price supports:

- Government pays the synthetic fuels producer the difference between an agreed upon support level and market prices;

Construction grant:

- Covers percentage of initial construction capital requirements.

The first phase of the commercial demonstration program proposed in the Task Force report would include a mix of plants and technology designed to provide the data needed to clarify the many uncertainties surrounding the creation of a whole new industry.

This points up another reason for getting the earliest possible start in this area: while large conventional power plants and refineries can ordinarily be built in three-to-seven years, the lead time associated with building a totally new industry is a much longer 10-to-15 years.

The initial program proposed by the Task Force, covering the period through 1978, would include:

Two shale oil plants, each producing 50,000 barrels per day;

Three high-BTU gas plants, each producing the equivalent of 40,000 barrels daily;

Four low-BTU boiler fuel plants, each producing the equivalent of 25,000 barrels per day, and

Five waste conversion plants, each yielding the equivalent of 6,000 barrels per day.

Goods Lost, Strayed Or Stolen In Shipment? Here's Help

Anyone ever troubled by the problem of goods lost, damaged or delayed in shipment can find help with *How To Recover For Loss or Damage To Goods In Transit.*

The book provides information in a single volume on shipped and carrier liability in various modes of transportation including admiralty, trucking, railroads and air carriers. It contains forms and statutes, and offers "how-to-" guidance on the rights, obligations and remedies for loss, damage and delay of goods shipped anywhere in the world.

The publication is available in looseleaf format in hardbound volume, updated by annual replacement pages, for $38.50 from Kenneth D. Weaver, Dept. DM, Matthew Bender, 235 East 45th St., New York 10017.

OCEANS AND ATMOSPHERE SOFTEN CLIMATIC CHANGES BY STORING, FREEING HEAT

THIS IS A RESERVOIR?—*Scientists with Commerce's National Oceanic and Atmospheric Administration say that the world's oceans are reservoirs of heat which, together with the atmosphere, cool the land in summer and warm it in winter.*

Storing heat in summer and releasing it in winter, the oceans and atmosphere act as heat reservoirs to cushion seasonal differences.

This is the conclusion of Drs. Abraham H. Oort of Commerce's National Oceanic and Atmospheric Administration (NOAA) and Thomas H. Vonder Harr of Colorado State University, who base their findings on thousands of temperature measurements in the atmosphere and oceans. Other researchers collected measurements from satellites, ground stations, and oceanographic vessels.

Oort, a researcher at NOAA's Geophysical Fluid Dynamics Laboratory at Princeton, and Vonder Harr used the temperature measurements to make quantitative estimates of how much heat is gained, lost, and stored by the oceans and atmosphere each month of the year in the northern hemisphere in 10-degree latitude belts.

The data used included satellite measurements of reflected sunlight and infrared radiation from earth for 1964 to 1971, five years of daily atmospheric temperature measurements taken by balloon at some 600 stations throughout the northern hemisphere and all of the ocean temperature observations on record at NOAA's National Oceanographic Data Center.

From this information the two scientists formulated a representation of the earth's heat balance that includes how much heat enters the top of the atmosphere, how much is stored in the atmosphere and the oceans, how much is transported by ocean and atmospheric circulation, and how much is interchanged between the atmosphere and the various parts of the earth's surface.

Worldwide impact

The scientists found that winds and ocean currents transport huge amounts of heat from warm to cold regions, thereby smoothing out the climate. Without this moderating influence, they conclude, the climate everywhere on earth would be more severe than it is, colder in winter and hotter in summer.

Both the oceans and atmosphere, the scientists say, seem to transport heat from whichever hemisphere is in summer to the one in winter. Ocean transport of heat is rated as of major importance south of 40 degrees latitude and strongest between 10 and 20 degrees. In these latitudes, in spring and fall, the oceans transfer about 5,000 trillion watts of heat northward. In winter, the heat transport is weaker and occurs farther north. One major feature that the researchers noted is a strong convergence of heat between 45 and 60 degrees north latitude in winter.

Oort and Vonder Haar speculate that this convergence may take place mainly in the western parts of the oceans, where dry, cold air from the land blows over the warm oceans, pulling from them enormous amounts of heat.

The scientists found a surprisingly large variation in heat storage and movement with seasons. The atmosphere, they discovered, collects heat most intensely in May and is warmest toward the end of July. In September and October, its rate of heat loss is greatest. In winter, heat energy is transferred from the earth's surface to the atmosphere at a rate of up to 130 watts per square meter. In summer, the flow reverses, with energy transferred from the atmosphere to the surface.

The heat budget analysis showed that from September through February the northern hemisphere loses heat. The rest of the year it is warming. The analysis also revealed that heat storage in land, snow, and ice is relatively small compared to that in the atmosphere and oceans.

The atmosphere plays the lead role in northern regions, Oort and Vonder Harr found. The main balance there is between the outflow of heat radiated into space from the top of the atmosphere and that carried in from other regions of the globe by winds. In the tropics, some of the heavy influx of heat from the sun is dispersed by ocean currents.

The situation, the researchers report, is most complicated in the middle latitudes. During the cooling half of the year, heat escapes from the top of the atmosphere, both atmosphere and ocean cool off, and ocean motions bring in heat. The other half of the year, when the zone is warming up, about half of the incoming radiation energy from the sun apparently is used either to heat the atmosphere locally or to export heat to higher latitudes, while the remaining half is stored in the oceans.

"The oceans undoubtedly form the most important medium to store heat, at least on a seasonal time scale," Oort and Vonder Harr report. But how far the seasonal changes penetrate the ocean surface is uncertain.

At some depth, the scientists believe, the waters of the sea must become impervious to such effects. Throughout most of the globe, the seasonal changes are believed to affect only the top 100 meters (328 feet) of the water, but in some isolated areas, such as the Norwegian Sea, dense cold water in winter may sink to much greater depths, and the annual cycle is noticeable to 1,000 meters (3,280 feet).

The researchers decided to concentrate on the top 275 meters (902 feet) of the ocean. The maximum rate of heat storage in the oceans, they report, lags behind the atmosphere a month and a half, reaching a peak in the middle of June and a minimum in the beginning of January. Most of this storage occurs east of North America over the Gulf Stream region and east of Asia over the Kuroshio.

From their study, Oort and Vonder Harr conclude that "it seems obvious that the oceans play a crucial role in determining the climate of the earth." But they say there are many uncertainties. For example, though the storage of energy in snow and ice is small compared to that of the oceans and atmosphere, "this does not mean that they do not play an important role in climate." Snow and ice practically dominate the radiation balance at high latitudes and on a long-time scale, the scientists believe, they may become even more important than oceans.

The next step, Oort says, is to concentrate on some of the local areas, such as the western parts of the oceans that are chilled by continental winds. "The data used in the present study," he comments, "provide only a few first glimpses of the earth's energy budget."

OCEAN FISHERY MANAGERS GET 200-MILE BRIEFING

The nation's "new look" in ocean fisheries is being explained to the people who are going to have a prime hand in administering it.

Representatives of federal agencies and members of Congress will brief more than 250 participants on their management roles in the 200-mile fishery conservation zone at a Sept. 13-17 national conference for Regional Fishery Management Councils at the Sheraton National Motor Hotel in Arlington, Va.

The meeting is the first for 139 voting and non-voting members appointed to eight regional councils established by the recently-enacted Fishery Conservation and Management Act as the basic management tool for America's fisheries.

The council members will have a wide variety of responsibility for managing the fisheries within their regions, including:

—developing fishery management plans and amendments to them;

—reviewing and revising assessments of optimum yield and allowable foreign fishing, and

—conducting public hearings on development of fishery management plans.

The conference is bringing together leading fishery authorities from around the country to discuss such topics as management council responsibilities, authority and duties; scientific and technical requirements for managing fisheries; foreign fishing under extended jurisdiction, and fishery management plans.

New Look Considered For Coastal Zones

Some of the most beautiful land in the United States is located along its shorelines—and some of the ugliest. A conference on visual quality and the coastal zone was held at Syracuse, N.Y., last year to deal with the problems involved in planning the uses of coastal resources.

Although the discussions focused on New York State's coastlines, the material covered is common to all coastal areas: What is visual quality? How can it be evaluated? How can it be protected and enhanced?

For a copy of *Visual Quality and the Coastal Zone*, make check for $4.00 payable to SUNY Research Foundation and send to School of Continuing Education, SUNY College of Environmental Science and Forestry, Syracuse, N.Y. 13210.

On the same subject, four working papers have been prepared by staff and students of the college to clarify the background of these issues, with hopes of eliciting responses.

Titles of the papers are: *Visual Quality in Land Use Control; Evaluating Visual Quality of the Coastline—Some Significant Issues; Landscape Evaluation—A Review of Current Techniques and Methodologies; Coastal Landforms and Scenic Analysis—A Review of the Literature, With a Preliminary Examination of New York's Shoreline.*

They are available for 50 cents each from New York Sea Grant Institute, State University of New York, 99 Washington Ave., Albany, N.Y. 12246.

SATELLITES LEAD FISHERMEN TO PREY

Soon the world's fish will have nowhere to hide!

A team of fishermen, engineers, physicists, oceanographers, biologists, and computer specialists have "found" fish with a satellite in a unique experiment off the Louisiana coast. The project represents the culmination of a larger effort—the LANDSMAT Menhaden and Thread Herring Investigation begun last year by Commerce's National Oceanic and Atmospheric Administration.

Early reports from the fishing industry indicate that the satellite did its job well.

Menhaden vessels, fishing under the direction of spotter aircraft, confirmed the presence of menhaden in most, though not all, of the high probability concentration areas predicted by analysis of LANDSAT data, while special navigation systems plotted the locations of the fish precisely and scientific observers aboard several vessels collected water samples.

Thus, they validated a technique for locating fish concentrations from space which may lead to a greatly improved understanding of coastal fishery ecology and to better methods for resource assessment and management.

Investigating the feasibility of using satellite data for assessing fish resources has been a cooperative industry-Federal Government project. Personnel from NASA's Earth Resources Laboratory and NOAA's National Marine Fisheries Service have been working with boats and planes from member companies of the National Fish Meal and Oil Association.

Their work has shown that there are relationships between the distribution of menhaden and water turbidity—which the LANDSAT sensor measures as water color. From the water colorations sensed by LANDSAT, scientists can infer the probable presence or absence of menhaden. The satellite cannot sense, or "see" fish directly.

Despite this success, NOAA says much more work will be required before an operational satellite system can begin aiding the fishing industry. At best it would be three to five years before such a system could go into effect.

Report Relates Technology To Everyday Problems

Relating technology to everyday living is a continuing responsibility of Commerce's Office of Technology and Forecast. With this goal in mind, its recently published Sixth Report reviews 15 technologies which are the object of unusually heavy patenting by foreign resident inventors and 22 high-activity technologies.

Included in the latter group are seven special reports, prepared by patent examiners, on such subjects as catalytic treatment of automotive exhaust gases, four-channel sound systems, algicides, and charge transfer devices and surface acoustic wave devices, two areas in the forefront of electronics technology.

The Sixth Report also updates a report, issued in 1973, on patenting in solar, geothermal, and tide and wave energy technologies. Energy areas newly reviewed are the production of energy from waste material, and the generation of electricity by windmills.

The four-part report also presents some comparisons of economic and patent data. The interrelationships of R&D expenditures and manpower to patenting in six selected industries are explored.

The report concludes with a review of six patents, five U.S. and one French, which were most often references in U.S. patents issued during 1975.

In releasing the report, C. Marshall Dann, Commissioner of Patents and Trademarks, commented: "The Sixth Technology Assessment and Forecast Report, like those which came before it, is representative of the Patent and Trademark Office's continuing effort to make more readily available to the public the wealth of technological information and data generated by the patent system."

Copies of the Sixth Report are available from the National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22161. The report is identified by PB-254188. The price is $7.50 for paper bound copies and $2.25 microfiche.

Fewer Phones Ordered As Installation Charges Rise

What happens to the volume of requests for telephone installations and disconnections following an increase in the installation charge? A report from Commerce's Office of Telecommunications, which studied the results of an increased charge in Colorado, indicates a drop of an estimated 9.4 percent.

The rates in Colorado increased from a minimum of $7 to a minimum of $23 for installation of a residential phone, and from a minimum of $7 to a minimum

of $15 for installation of a business phone. Approximately 4,800 fewer telephones were installed per month—or 57,000 per year—than had been anticipated, based on an economic regression model that projected what the rate of installation and disconnection would have been without the additional charge.

Of the above, 1,500 a month were potential residential main station telephones and the remaining 3,300 would have been business or extension phones. Moreover, the data suggest that about 2,050 customers who would have disconnected their phones each month did not.

The report, *Increased Telephone Installation Rates: A Statistical Analysis of Colorado's 1972 Rate Change*, OT Report 76-90, is available at $4 per copy from the National Technical Information Service, Springfield, Va. 22161. Its accession number is PB 255807

SPECIALTY STEEL INDUSTRY STUDIED WHILE IMPORT RELIEF IS IN EFFECT

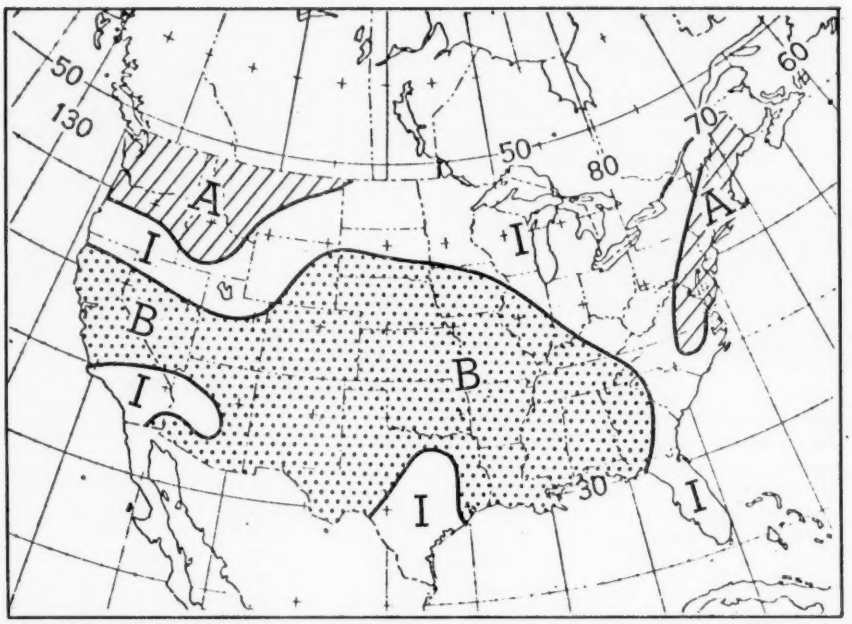
Concerned officials and industry representatives will be able to monitor the progress which the specialty steel industry makes while import limits remain in effect on that commodity.

Commerce's Office of Import Programs has released the first in a series of quarterly reports reviewing the state of the specialty steel market while the import restrictions imposed June 14 by President Ford remain in force.

The report highlights data on apparent consumption and import/consumption ratios developed by the Department's Office of Import Programs following the President's temporary imposition of quantiative limitations on specialty steel imports.

Import relief has been provided to the industry in the form of an "orderly marketing agreement" with Japan setting limits on shipment from that nation to the United States. In addition, quotas imposed by Presidential action restrain shipments from other foreign producers. Specialty steel consists of stainless and alloy tool steels, representing about 2 percent of total steel import tonnage.

The relief action, effective for a three-year period beginning June 14, was taken after a finding earlier this year by the U.S. International Trade Commission that imports are a substantial cause of injury to the domestic industry. It is the first import restraint action taken under the "escape clause" import relief provisions of the Trade Act of 1974 and responds to a petition filed by the alloy steel and stainless (specialty) steel industry and the United States Steelworkers of America.



OUTLOOK FOR FALL—*Areas marked "A" have a 60 percent chance of having above normal temperatures through November. Areas marked "B" are expected to have below normal temperatures. Areas marked "I" are indeterminate, according to Commerce's National Oceanic and Atmospheric Administration.*

These restraints may be relaxed or removed at any time if the President finds that the domestic industry is regaining a healthy production and employment position.

In order to review the effectiveness of the restraint program and the industry's economic condition, a monitoring system has been initiated to provide pertinent data on a current basis. It includes data on shipments, imports, exports, apparent consumption, and import/consumption ratios by calendar quarters for the years 1974 and 1975 and first half of 1976.

Specialty steels are characterized by exceptional strength and hardness, and resistance to oxidation, heat, and abrasion. These materials are used extensively by industry in the manufacture of automobiles, appliances, aircraft engines, tools, and storage tanks, among others.

New Fire Academy To Be Located In Capital

Many of America's firemen will be responding to schoolbells instead of firebells in the near future.

The National Fire Academy called for by the 1974 Federal Fire Prevention and Control Act moved a giant step toward reality recently when Commerce Secretary Elliot L. Richardson selected the former Marjorie Webster College campus in Washington, D.C., from among more than 200 proposals for its site.

The National Fire Prevention and Control Administration, which will administer the Academy, is an agency of the Department of Commerce.

Secretary Richardson said that major fire service organizations throughout the United States expressed written support for selection of the Marjorie Webster site. Location of the Academy in the District of Columbia also will permit coordination of Academy programs with other ongoing programs of the Fire Administration.

The site, which covers some 8.5 acres of land in the northern corner of the District of Columbia, was approved by the National Fire Protection Association, the International Association of Fire Fighters (AFL/CIO), the International Association of Fire Chiefs, the National Volunteer Council, the International Society of Fire Service Instructors, the International Association of Black Professional Fire Fighters, and the International Fire Service Training Assn.

Academy programs will continue to depend on the ongoing research of the Fire Research Center at Commerce's National Bureau of Standards as well as the Fire Administration's National Fire Safety and Research Office, both of which are located in the Washington area.

While some building rehabilitation will be necessary, new construction is not needed. The Academy will retain the site's campus atmosphere and residential community setting. The Academy programs are planned for a small, mature resident student body with no more than 200 students in residence at any one time. Student activity will be intensive classroom and seminar-type instruction.

Productivity Conference Slated For Charleston, S.C.

Commerce's continuing campaign to increase the productivity of the nation's business moves to South Carolina later this month.

Commerce Department officials will join industry and academic experts at a September 28 conference at The Citadel in Charleston, S.C., to discuss methods and ideas for increasing productivity.

Designed primarily to help small and medium-sized businesses monitor and raise output of goods and services, the conference will offer attendees an opportunity to ask questions and engage in discussions with the speakers.

The Charleston conference is part of a nationwide series designed to inform business leaders about new productivity techniques and their application.

Because of the widespread interest in the subject, Commerce's Office of the Ombudsman has prepared a series of bulletins on productivity that are available through the Commerce district office in Columbia, S.C., or from the Office of the Ombudsman, U.S. Department of Commerce, Washington, D.C. 20230.

For reservations or further information contact the Director of Continuing Education, The Citadel, Charleston, S.C. 29409 (803-577-6900), or the Charleston, S.C. satellite office of the U.S. Department of Commerce (803-577-4171).

New Medical Technology Studied By Commerce Unit

Innovative medical technology will be the subject of an exhibit at the American Hospital Association's annual meeting in Dallas September 19-23, sponsored by Commerce's National Bureau of Standards (NBS). NBS has developed an Experimental Technology Incentives Program (ETIP) to seek ways of improving the environment for technological change.

On September 20, ETIP personnel will present a slide show and answer questions on the program.

ETIP conducts experiments in four areas: procurement policy, regulatory policy, economic assistance policies, and research and development policies. In the procurement area, ETIP is working with the Veterans Administration to select medical products, policies, and procedures that are suitable candidates for experimentation. The three initial products chosen are portable oxygen units, syringe and needle destructors, and surgical gloves.

For further information, contact Joseph Berke, ETIP, Room A735, Administration Bldg., National Bureau of Standards, Washington, D.C. 20234.

Calendar Of Business Events

Sept. 13-15—Washington — Transactional Analysis in Management, Georgetown Univ. For information, Betsy Girton, Continuing Management Education Program—SSCE, Georgetown Univ., Washington, D.C. 20057 (703-525-6300).

Sept. 13-17—Atlanta—1976 AAMA Convention/Bobbin Show, Georgia World Congress Center. For information, American Apparel Manufacturers Assn., 1611 N. Kent St., Arlington, Va. 22209 (703-524-1864).

Sept. 14-16—Chicago—Energy Management in Manufacturing Conference, Sheraton O'Hare Motor Hotel. Sponsors: Society of Manufacturing Engineers, others. For information, Technical Activities Dept., SME, P.O. Box 930, Dearborn, Mich. 48128 (313-271-1500 x403).

Sept. 14-16—Dallas—Increasing Machining Productivity with High Speeds & Feeds Clinic, Statler Hilton Hotel. Sponsor: Society of Manufacturing Engineers. For information, SME, see address above.

Sept. 14-16—Cincinnati—Power Coating IV Conference & Exposition, Convention Center. Sponsor: Assn. for Finishing Processes, SME. For information, Jon Grove, SME, see address above.

Sept. 15—Niagara Falls, N.Y.—1976 Small Business Assistance Conference, Niagara Falls Convention Ctr. Sponsors: Commerce, SBA and others. For information, Conference Headquarters, Room 1314, 111 W. Huron St., Buffalo, N.Y. 14202 (716-842-3354).

Sept. 15-16—Washington — Government Procurement Program, Federal Bar Assn. 1976 Convention, Mayflower Hotel. For information, FBA National Headquarters, 1815 H St. NW., Washington, D.C. 20006 (202-638-0252).

Sept. 16-17—San Antonio—1976 Regional Operations & Automation Workshops, Hilton Palacio del Rio. For information, American Bankers Assn., 1120 Connecticut Ave. NW., Washington, D.C. 20036.

Sept. 16-17—San Francisco — Project Management: Designing the Matrix, Hyatt Regency Hotel. Sponsor: The Wharton School. For information, Heidi Kaplan, N.Y. Conference Mgt. Ctr., 360 Lexington Ave., New York 10017 (212-953-7262).

Sept. 20-22—San Diego—Financial Analysts Federation Annual Fall Conference, Hotel Del Coronado. For information, FAF, 219 East 42nd St., New York 10017 (212-557-0055).

Sept. 20-22—Chicago—Successful Consumer Packaging, Sheraton Chicago. For information, Heidi Kaplan, N.Y. Conference Mgt. Ctr., see address above.

Sept. 20-24—Gaithersburg, Md.—8th Materials Research Symposium: Methods and Standards for Environmental Measurement, National Bureau of Standards. For information, Ronald B. Johnson, Materials Bldg., Room B 348, NBS, Gaithersburg, Md. 20234.

Sept. 21-22—Gaithersburg, Md.—Cryptography in Support of Computer Security, National Bureau of Standards. Sponsor: NBS's Institute for Computer Sciences and Technology. For information, Shirley Radack, NBS, 301-921-2731.

Sept. 21-23—Dearborn, Mich.—How To Select, Use & Maintain Coolants & Lubricants, Dearborn Inn. For information, Jerry Exner, Society of Manufacturing Engineers, P.O. Box 930, Dearborn, Mich. 48128 (313-271-1500 ext. 316).

Sept. 24—Rockford, Ill.—Business Opportunity/Federal Procurement Conference, Clock Tower Inn. Sponsor: U.S. Rep. John B. Anderson. For information, Mike Masterson, c/o Rep. Anderson, 1101 Longworth House Office Bldg., Washington, D.C. 20515 (202-225-5676).

Sept. 24—Toronto—Workshop on Safety & Health in the Chemical Industry, Royal York Hotel. Sponsors: Manufacturing Chemists Assn. & Industrial Accident Prevention Assn. (of Canada). For information, Milton Freifeld, MCA, 1825 Connecticut Ave. NW., Washington, D.C. 20009 (202-483-6126).

Sept. 29-Oct. 1 — Scottsdale, Ariz. — Marine Distribution of Bulk Plastics Resins, Scottsdale Hilton. Sponsor: Society of the Plastics Industry, Inc. For information, SPI, 355 Lexington Ave., New York 10017 (121-573-9400).

Sept. 30-Oct. 1—Palo Alto, Calif.—Software Management—Defense Systems & Other Federal Programs, Rickey's Hyatt House. For information, V. Traub, American Institute of Aeronautics & Astronautics, Suite 1403, 444 W. Ocean Blvd., Long Beach, Calif. 90802 (213-437-7465).

International Commerce Report

U.S. Pressing Initiative At World Trade Talks

GENEVA MTN DISCUSSIONS COULD BE ASSISTED BY RECOVERY, SLOWED BY AGRICULTURAL PROBLEM

Will the worldwide trade negotiations in Geneva pick up momentum this fall and make significant progress toward the goal of expanding and liberalizing international trade? Is a target windup date of the end of 1977 still feasible?

Traders in every nation are asking these questions, echoing the concern expressed by President Ford and other heads of state at the economic summit meeting held in Puerto Rico this summer. Leaders of seven major industrial nations took that occasion to ask for a speedup in the Geneva discussions and restated their appeal — made at Rambouillet, France, a year earlier—that the negotiations meet the 1977 deadline.

Observers point to several circumstances that now affect the pace of the Multilateral Trade Negotiations (MTN). Economic uptrends in most major industrialized nations can ease some negotiating pressures and aid the process of agreement. On the other hand, uncertainties regarding national leaderships can be a drag to the negotiations. Several major nations, including the U.S., will hold national elections shortly. The entire membership of the governing Commission of the Common Market has a term of office expiring at the end of 1976, and substantial changes are expected.

The U.S. has attempted to keep momentum alive in the MTN, taking an active lead in the working groups and offering several comprehensive proposals designed to promote movement. The six negotiating groups (Tariffs, Nontariff Measures, Tropical Products, Sectors, Agriculture, Safeguards) have been at work since the spring of 1975.

Achieving progress in the Agriculture Group has proved to be a particularly thorny problem. Here there is a fundamental and continuing disagreement between the United States and the European Community regarding how the agricultural sector will be dealt with in the negotiations. The Community, seeking to minimize changes to its Common Agricultural Policy, views agriculture as an area requiring its own trading rules. The Community, therefore, would place sole responsibility for the conduct of negotiations on all issues affecting agricultural trade upon the Agriculture Group. According to the Community, any solutions developed in other negotiating groups should not be applied to agricultural products.

The U.S., with its substantially open market policy, has taken the position that agriculture and industry should be treated together throughout the negotiations. The U.S. believes that in order to assure that agricultural and industrial negotiations are undertaken "in conjunction," as is called for in the Trade Act of 1974, there must be a link between the Agriculture Group and other negotiating groups, particularly those considering nontariff measures and tariffs. Thus, the U.S. presents and discusses proposals in the functional negotiating groups with both agriculture and industry in mind.

Despite the pervasive agricultural problem, significant achievements have been made in other areas of the negotiations and can be exected to continue with the fall meetings. In March the U.S. negotiating team presented a comprehensive formula for tariff reductions. Developed after extensive discussions with representatives of private enterprise and consultations with Congress, the proposal seeks to achieve a significant overall reduction in tariffs and harmonization of rates. Subsequently, the Common Market offered its own formula. This relies solely on a harmonization approach, which is considerably less ambitious than the U.S. proposal. The MTN negotiators are scheduled to receive formula presentations from Japan, Switzerland and possibly other delegations this fall.

Completion of the varying presentations on possible tariff formulas will signal a period of hard bargaining, not only on the form of the tariff formula itself, but also on the rules and procedures for handling exceptions to the formula. Exceptions are integral to tariff negotiations. Thus far MTN negotiators have not gone beyond agreeing that great restraint ought to be used in excepting specific items from formula reductions.

Negotiations are nearing completion concerning the reduction of tariffs on tropical products. In launching the current round of trade negotiations, tropical products were set up as a "special and priority sector" for developing countries. The United States and other developed countries have offered lists of tropical products on which they are willing to negotiate tariff reductions. The LDCs have expressed disappointment with the developed country offers. The U.S. position that it expects some degree of reciprocity for its tariff concessions has been criticized by the LDC negotiators.

The U.S. is alone in seeking contributions from the LDCs in the tropical products context. The developing countries are resisting the suggestion that they offer contributions in accordance with their level of development, or at least are seeking to postpone the implementation of their contributions until the end of the MTN while securing early implementation of U.S. concessions. Consultations on tropical products will continue among the countries until the fall meeting of the Tropical Products Group. The developing countries are urging a final agreement at the earliest possible date.

Perhaps the most significant progress thus far has been made in the area of nontariff measures (NTMs), where the world is witnessing the first effort to deal with a range of nontariff distortions to trade during a major round of negotiations. Activity in this area has been intense. Until July, work on nontariff measures was concentrated in four fields: quantitative restrictions, standards, subsidies and countervailing duties, and customs matters. In July it was agreed also to include government procurement in the nontariff measure negotiations.

Negotiations on a draft code on government procurement practices have been going on for a number of years under the auspices of the Organization for Economic Cooperation and Development

(OECD) in Paris. Thus, in preparation for the first MTN meeting on government procurement, to be held next month, the OECD Secretariat has been asked to prepare a background paper on the draft code for the use of the MTN negotiators. Substantive meetings on government purchasing may begin early next year.

In the quantitative restrictions area, the U.S. plans to offer in November some specific suggestions on negotiating procedures. Bilateral consultations on quantitative restriction problems have been going on for some months. A U.S. proposal on negotiating procedures should help accelerate the pace of discussions.

Work will continue in the fall on the draft code of conduct on standards as an approach toward the resolution of trade problems presented by the wide use of product standards. Although considerable time-consuming work remains to be done, work on the standards code is probably more advanced than any other phase of NTM work. When work resumes on the code in the fall it will be reviewed for its applicability to agricultural and tropical products.

Concerning subsidies and countervailing duties, progress has been slower. The U.S. would like to tighten international rules concerning subsidy practices. Other countries are more interested in limiting the use of countermeasures, especially the U.S. countervailing duty law. The U.S. outlined a proposal to deal with both subsidies and countermeasures late last year. However, negotiations on the subsidies issue have been at a virtual standstill since the U.S. presented its proposal, due principally to the disagreement over whether agriculture products should be covered by such a proposal. The U.S. negotiators are hopeful that the fall round of meetings will bring about a more cooperative atmosphere on this issue.

Work on customs matters is broad and varied, including customs valuation, import documentation, customs nomenclature and customs procedures. Little substantive work has been accomplished in the customs area. However, as a result of recent bilateral discussions on MTN issues held over the summer, it is apparent that there is a desire to move ahead in the customs area.

Continuing as a complex issue is the sectoral negotiation approach. The use of this approach, which provides for the coordinated reduction or elimination of all barriers to trade, both tariffs and nontariff measures, in selected product areas, is still being considered. The United States has stated that it intends to propose a framework for sectoral negotiations in steel and is examining other product sectors to determine whether they may also be appropriate for sectoral negotiations.

The U.S. has explained its intention to seek negotiated solutions to cyclic distortions in steel trade while liberalizing conditions in this trade. Canada has also stated its intention to propose sectoral negotiations in the nonferrous metals and wood sectors. Some countries oppose consideration of a sectoral approach at this time. They prefer to wait until agreement has been reached on general approaches and it can be demonstrated that there is a need for a sectoral approach as a complementary technique.

A major U.S. objective has been to complement the lowering of trade barriers by the development of an improved international safeguards system. In July the U.S. presented its proposal, which sets up guidelines for countries that find it necessary to establish temporary import restrictions to assist domestic firms and workers who have suffered injury due to increased imports. This proposal for a negotiating framework will be discussed in substance next month.

It is still not known whether there will be a meeting this fall of the Trade Negotiating Committee, which last met in December 1975. This committee is charged with overall supervision of the negotiations. If the committee does meet, one issue is certain to be on the agenda—reform of the General Agreement on Tariffs and Trade (GATT), whose rules have provided the general framework for world trade during the past 25 years. The LDCs are particularly interested in GATT reform, and establishment of a GATT Reform Group within the MTN could bode far-reaching consequences for the existing world trading system.

U.S. Aviation Seminars In Three Latin Nations Sharpen Buyer Interest

Ecuador is looking toward replacement of both of its international airports, Venezuela plans to modernize its national aviation system, and Brazil is rapidly expanding its light-plane capacity. These and other developments contributed to the widespread interest in a series of seminars conducted in these countries recently by representatives of eight leading U.S. avionics and engineering firms.

Under sponsorship of the Commerce Department, with collaboration of the State Department and the Federal Aviation Administration, the seminars were attended by the heads of each country's civil aviation authority and other key civil, military, and technical personnel. The U.S. company officials made presentations on developments in aviation and airport technology, and at the same time learned more about each country's civil aviation agencies, development plans, and particular aviation problems.

For replacement of Ecuador's international airports—at Quito and Guayaquil—the government probably will be seeking to prequalify bidders interested in design and engineering contracts, possibly at this time or later this year. Contracts would be awarded by the end of 1977, according to present schedules. Venezuela plans to spend well over $100 million to develop its national aviation system, which will include radar coverage for the entire nation and replacement of much of the existing aviation support equipment. Brazil is striving to meet its own considerable internal light-plane demand. It is also seeking export markets, particularly in Latin America and possibly even in the United States. Seminar participants noted some receptivity to foreign investors capable of providing technology, and some were actively investigating possible joint ventures with Brazilian avionics and engineering firms.

All of the members agreed that the meetings gave their firms' products and services extensive market exposure. Walter Robinson of the engineering firm of R. Dixon-Speas was particularly pleased with the high caliber contacts he made. Without the seminar, he stressed, he would have had to make numerous trips to these countries and perhaps wait many months before obtaining access to key decision makers in the aviation field.

H. D. Shamblin of AEROCOM garnered an order of some $100,000 in consoles and communications equipment for the Maiquetia, Venezuela, approach control center. In addition, he is discussing the possibility of a licensing agreement to manufacture communications equipment with a Brazilian firm. He is highly optimistic with regard to the long-term future for his company in Latin America.

Kevin Beach of Cardion Electronics said he met key decision makers "who knew what they needed and what was required." He felt that his participation enhanced the reputation of his firm in the countries visited.

USSR Chamber To Sponsor Railroad Equipment Show

The USSR Chamber of Commerce is sponsoring an international exhibition of railroad equipment near Moscow in July 1977. Featured will be locomotives and sub-assemblies; freight cars; equipment for construction and maintenance of rail track; and baggage handling systems.

Interested firms should send 10 copies of catalogs to the USSR Chamber of Commerce and Industry, Directorate of Foreign Exhibitions in the USSR—Rail Transport '77, Sokolnicheski val 1-a, Moscow 107232. For additional information contact Christine Lucyk, Bureau of East-West Trade, U.S. Department of Commerce, Washington, D.C. 20230, phone 202-377-3352.

CHECKING THE ATMOSPHERE—*Anthony Porter (left) of Analgas Pty. Ltd. goes over specifications of a Dasibi ozone monitor with visitors at Sydney show.*

Australian Environmental Concern Augments Equipment Market, U.S. Exhibitors Find

The growing pressure of population on scarce water resources, increasing public and governmental concern for the quality of the environment, and the impact of pollution control legislation all combine to make Australia an attractive market for U.S. manufacturers of air and water purification and control equipment. This was evidenced by the high level of interest generated by the recent Clean Air and Water Equipment Exhibition at the U.S. Trade Center, Sydney.

The exhibition, with 17 participants representing 28 U.S. firms, featured the latest American equipment for the monitoring, measurement, abatement and removal of pollutants in air and water. The equipment, much of which was new to the Australian market, was viewed by some 900 key buyers from a range of industries, public utilities, and government. Polls of those attending indicated greatest interest in oil and water pollution control equipment, pumps, and flow measuring devices. Some visitors expressed an interest, for the future, in an exhibition of noise and dust control equipment.

A feature of the exhibition was a series of six technical sessions at which exhibitors were able to explain in depth new product developments and the latest advances in American technology. Each session attracted well over 100. Exhibitors recorded off-the-floor sales of $283,875 and projected sales of $3.2 million during the next year.

The total Australian market is predicted to reach $121 million by 1978. Although imports comprise more than 20 percent of all purchases of pollution control equipment, the domestic industry is growing in strength as a result of licensing and joint-venture agreements with overseas firms. For some time to come, however, domestic output will be heavily dependent on imported technology and components, and at the close of the exhibition, three licensee and two joint-venture agreements were under negotiation.

COMPUTER 'SPILLOVER' SHOW IN LONDON BECAME MAJOR EVENT

Due to strong competitive pressures in the U.S. and current lack of British and European competition, most U.S. products in the mini-computer and peripherals market continue to enjoy technological and price advantages in the U.K. market.

This was apparent at a computer exhibition this summer at the London U.S. Trade Center, held primarily as a "spillover" exposure for U.S. firms that could not be fitted into a jam-packed and highly successful January event. Designed for 12 firms, it snowballed into a full-sized exhibition with 30 participants, who greeted 1,603 visitors and reported $1,348,000 in floor sales, plus projections of $21,536,000 more over the next year.

Products appearing to have the best sales potential were: mini-computers, disc memory controllers, head per track disc memories, tape drive systems, data display systems, optical scanners, optical readers and microprocessors and microcomputers.

Due to the high rate of inflation in Britain and rising labor costs, British industry is trying to cut costs and increase efficiency. It is turning to computers, especially mini-computers, to assist in this effort, and this has sparked the remarkable interest demonstrated at the two Trade Center shows. Although there is a lack of competition for advanced U.S. products at present, U.S. producers should be aware that European firms, such as ICL, Siemens and Philips, are entering the scene.

INTRODUCTION IN BRITAIN—*M. J. Jackson (right), U.K. representative for Compuscan, Inc., explains how a hand-held optical scanner works in conjunction with a terminal, part of new system introduced to British market at* Minicom 2, *London U.S. Trade Center. At left is R. J. Colebrook of Aspen Electronics Ltd.*

SIGNS OF U.K. REVIVAL FIX ATTENTION ON NEED TO RESTOCK, REEQUIP

American exporters should at least maintain their current, important share of the United Kingdom market this year, and they may even attain a modest growth in sales by the early part of 1977. Britain's recession reached its low point toward the end of 1975, but there was no clear upward movement until the first quarter of this year, when the gross national product rose at an annual rate of 4 to 4.5 percent.

Inflation has been slowed. Industrial production is now shifting to an upward slope and a strong export performance is presently leading the country away from its slump. Problems of a fundamental nature do remain in inflation, unemployment and weak consumer demand. Productive capacity has been eroded by nearly two years of negative investment in manufacturing, but there are some signs of a turnaround, according to Borrie I. Hyman, Commercial Counselor at the U.S. Embassy in London.

Noteworthy near-term opportunities for American goods may be found in the gradual reequipping of industry, the rebuilding of depleted inventories and the ongoing need for components and materials to support the U.K. export surge. Specific areas of greatest promise are in high technology, including electronic components, data-processing equipment and peripherals; capital goods, including equipment for offshore oil exploitation and foundries; chemicals; waste water treatment equipment and systems; machinery and processes for graphic arts; agriculture equipment and accessories; quality consumer goods and fisheries products.

The encouraging signs for the United Kingdom economy should be welcomed but not exaggerated. Recovery thus far is modest, and it may be several months before such vital indicators as investment and employment show significant improvement. Having made this point, it is nonetheless valid to see in the overall picture a good potential for sustained if not rising export opportunities in selected areas.

The important thing is not to downgrade this market because of current problems. So crucial in these circumstances, business confidence seems to be on an upward trend. Actual and anticipated industrial growth is bolstering this confidence. Other confidence-inducing factors are the slow recovery of profit margins from very low levels, increasing new orders, indications that fixed investment has at least ceased to decline and the successful agreement among industry, labor and government for a second-phase incomes policy.

By mid-1977, the inflation rate may be brought to a single figure. It is now running at an annual rate of 15 percent, well down from the frightening level of 26.9 percent of not too many months ago. Further evidence of a building national consensus on the gravity of the country's problems and the need for early resolution comes from recent government-labor-industry meetings and studies on "industrial strategy," a medium-term program designed to improve the growth and efficiency of the nation's industrial plant.

Significant for the private sector is a statement emerging from this exercise noting that the government is "committed to promoting a profitable and vigorous private sector aspect of our mixed economy, and to giving greater priority to industry over consumption or even our social objectives." If such is indeed the direction of government policy and if it is backed up by deeds, business confidence may gain further and translate into sorely needed new investment.

Finally, the GNP is now growing at an annual rate of 4 to 4.5 percent, a respectable level and one in keeping with the government forecast. Over the next 12 months, the government expects GNP to grow at an annual rate of some 5 percent.

American exports to the United Kingdom in 1975 came to $4.53 billion, close to 10 percent of the market, making the United Kingdom the fourth most important U.S. customer. As noted, the U.S. should be able to hold this market share in 1976 and probably slightly increase it in 1977, despite the present dollar-pound exchange rate, which makes U.S. export prices somewhat less attractive than a year ago. On the other hand, in relation to third-country exports to the United Kingdom, the U.S. competitive position is sound. Our generally lower unit costs of goods and high quality are retaining and augmenting the numbers of British customers for U.S. products.

American exporters must of course be alert to the changing economic factors during this recovery phase in the United Kingdom. The U.S. Embassy will continue to try to identify areas of particular opportunity. Hyman knows from business contacts and trade shows that interest in advanced technology products from the United States remains high. Major shows and special promotions at the London U.S. Trade Center underline this observation. Some recent exhibitions there which proved notably successful featured mini-computers and peripherals; automotive diagnostic, maintenance and repair equipment; and process control instrumentation.

There is no question of the enduring strength of the U.K. market for American data processing equipment, particularly in the form of mini-computers and

IN THE U.K. NORTH SEA—*Choctaw II, an offshore pipe laying barge, is shown laying part of a 30-inch, 22-mile connection between Brent and Cormorant in 500 feet of water. Oil from the Brent field area will be conveyed through this line to Shetland, which will have a refining capacity of one million barrels a day.*

peripherals. Equally firm is the demand for electronic components, which outstrips the capacity of U.K. manufacturers that cannot fully meet domestic and export requirements.

In seeking out industrial areas of the economy meriting government assistance, the "industrial strategy" program has identified more than 30 industries, including foundries. American firms with special technology and equipment in this field should begin now to explore opportunities. The embassy will be making market probes in this industry as well as in others noted as "strategic" in an effort to spotlight additional export targets for capital goods.

Offshore oil exploration and exploitation will offer export prospects for a long time to come. U.S. companies should be looking beyond the obvious equipment needs and investigate what appear to be significant possibilities in the supply of innovative platform design and equipment, subsea systems, maintenance and repair equipment and systems for safety, security, communications and pollution control.

Two dry years have aggravated water pollution problems for Britain. Agricultural and industrial waste, plus the growth of "new towns," have underlined urgent needs for both sewage and water treatment equipment and systems. This need will increase as industries now running well below capacity and new companies develop production to ride with the economic recovery.

Although U.S.-made tractors and other large field machinery have been displaced in most part by the products of U.S. subsidiaries in Europe, the British farmer's preference for a larger tractor means available power for a wider range of agricultural accessories. With new emphasis on corn and feedgrain production, the demand for equipment to handle, dry and store these grains has grown substantially. Also, significant change in the past two years in the British climate has heightened demand for all types of spraying equipment, especially the airborne type.

Even though consumer demand in Britain is low, squeezed by the incomes policy and inflation, quality goods and those with quality and novelty combined have made striking impressions on buyers.

Furniture, for example, has done exceptionally well both in retail establishments and at a recent show at the Trade Center. A special promotion across the board of American goods at a major department store in the English Midlands last spring proved out estimates of the demand for quality consumer goods, as did a recent Trade Center show on leisure goods, including do-it-yourself items.

Other product areas where market research and embassy investigation suggest there should be substantial export opportunities over the next year may be noted from some of the official U.S. promotions planned in the United Kingdom. September is a crowded month with a major U.S. participation at the Farnborough International Air Show, featuring avionics and aircraft accessories; a Trade Center show on specialized packaging, food processing and bottling equipment; participation in the Plant and Engineering and Maintenance Exhibition at the Birmingham National Exhibition Center; and a consumer goods promotion at Jenners department store in Edinburgh. Later in the year the Trade Center will feature a show on scientific and industrial lab instrumentation, and the United States will have an official pavilion in Offshore International in Birmingham. Next year will begin with Trade Center shows on data communications equipment in January and automated business equipment in February.

HONDURAS NEEDS IMPORTS TO SUPPORT RESURGENCE

The Honduran economy is expected to grow by at least 5 percent in real terms in 1976 following two years of virtual stagnation. Imports are forecast to total approximately $550 million this year, some 35 percent more than in 1975, with most of the increase in the form of capital goods and raw materials needed to supply the recovering economy.

In recent years imports from the United States have accounted for 40-45 percent of total Honduran imports. Commercial Officer Donald J. McNally believes that trade promotion efforts of the U.S. Embassy in Tegucigalpa combined with greater awareness of this market by American exporters can enable the U.S. to attain an even greater share.

According to the Honduran Central Bank, real GNP growth in 1974 was 3.5 percent. In 1975 the corresponding figure was minus 1.4 percent. The modest performance in 1974 resulted primarily from the effects of Hurrican Fifi which struck the country in September of that year, while the negative growth rate recorded in 1975 was caused mainly by continuing effects of the hurricane as well as a drought which affected much of the country from May to August.

Agriculture, construction and commerce are expected to lead the Honduran economic resurgence, with the greatest activity being generated by the public sector. The Honduran Government is nearing the end of reconstruction work initiated after the hurricane. It is now devoting itself increasingly to implementation of the National Development Plan announced in January 1974. The principal elements of that plan deal with execution of the country's agrarian reform law; industrialization of Honduras' forestry resources; encouragement of foreign and domestic investment, especially in the areas of industry and tourism; improvement of medical care throughout the country; extension of the road network in the Departments of Yoro and Olancho; and construction of a large hydroelectric plant at El Cajon.

The level of activity in the private sector will also be quite substantial. Principal private projects include construction of two 200-room hotels, construction and equipping of a 120-bed hospital, and purchase of machinery and yarn for expansion of the textile industry, agricultural equipment and chemicals necessary to double sugar cane production, food processing and canning machinery for citrus fruits, industrial chemicals for manufacture of soaps and detergents, and machinery for boning poultry and water treatment for the poultry industry.

Also, several Honduran entrepreneurs have expressed interest in a number of products (pharmaceuticals, electronic devices, toiletry products, candy, etc.) which they would like to produce under license from U.S. firms.

Important trade opportunities

Hospital Equipment and Supplies: The Honduran Government received a $14 million loan from the Inter-American Development Bank (IDB) in January to finance construction of a 50-bed maternity hospital in San Pedro Sula, eight 50-bed emergency hospitals in medium-size cities throughout Honduras, and 324 rural health centers. The hospital to be built in San Pedro Sula will be eventually enlarged to 400 beds and will become a general hospital.

The first bids have already been let on the equipping of a 522-bed university hospital to be inaugurated in 1977. Many more bids are expected to be published in the next few months. This is being financed with a $7.3 million IDB loan.

The government plans to begin construction on a 150-bed hospital in La Ceiba in 1977, at a reported cost of $3.5 million. However, many problems are still to be resolved before a firm financing package can be obtained.

IDB will provide approximately $900,000 to finance expansion of the government-run Santa Teresa hospital in Comayagua.

A group of private physicians plans to construct and equip a 120-bed general

hospital in San Pedro Sula. Construction is expected to begin in 1976 and be completed before 1978. Financing is to be provided by Honduran private banks.

Several of the largest private hospitals and clinics in Tegucigalpa, San Pedro Sula and Choluteca are now expanding and modernizing facilities. Financing will come from Honduran sources.

U.S. exporters enjoy a strong competitive position in this product field in Honduras. They have been accounting for more than 70 percent of hospital/medical product imports. Products expected to be in strong demand in the next 12-18 months are: X-ray equipment; diagnostic devices; laboratory equipment and supplies, especially reagents; operating room furnishings and lights; surgical instruments; disposables (syringes, gloves, bandages, etc.); autoclaves; food service equipment; laundry equipment; hospital furniture; and ambulances.

Agricultural Equipment, Machinery and Chemicals: The Honduran Minister of Natural Resources recently stated publicly that he expects Honduras to receive more than $150 million in credits for agricultural projects in the next 2-3 years, mainly from IDB, the World Bank, and the United States and Canada. These funds will be used mainly for infrastructure in the lower Aguan Valley and to provide financing, technical assistance, and basic inputs (agricultural machinery, fertilizers, pesticides, irrigation equipment, etc.) for the government's Agrarian Reform program.

The Honduran Banana Corp. obtained a $10 million loan from a consortium of international banks in June, to be used to finance operations of independent banana growers and banana cooperatives.

Agricultural activity by the private sector in 1976 will be significant, as cultivation of sugar cane, coffee, cotton and tobacco is expanded. Additional activity will take place in production of poultry.

Imports of plows; cultivators, harrows, seeding machinery; mechanical rakes, scythes, reapers and thrashers; incubators; and machinery for grading grains, fruits and eggs showed the greatest increase in demand in 1975 and are enjoying a good sales position in 1976. However, the lion's share of the import market in this area is accounted for by tractors and spare parts, which accounted for 73.6 percent of all agricultural machinery and equipment imported by Honduras in 1975.

Forestry Industries: In May, Honduras signed a memorandum of understanding with IDB and the Government of Venezuela regarding a loan of $103.4 million to be used to finance part of the Honduran Government's pulp and paper project, the total cost of which is now placed at $414.6 million. It is reported that $337.6 million will be spent on plant and equipment, $62 million on road construction, and $15 million on construction of a port facility at Puerto Castilla. Nearly $50 million of the IDB loan will be spent on road construction, $41 million is earmarked for the pulp and paper project, $10 million will go for purchase of capital stock in the project by the government, and the rest on engineering studies.

Initial work on the industrial part of this project will be centered on the construction of three sawmills, one to be built at Corocito and the other two at sites not yet determined. The sawmills, expected to be in operation in late 1979, are expected to produce 450,000 cubic meters of lumber annually.

The pulp and paper plant is expected to begin production in 1983 of 203,000 tons of cardboard and 28,000 tons of corrugated cardboard annually.

This activity will provide strong demand in the short-to-medium term for a substantial amount of machinery, equipment and services.

Road and Port Construction: The World Bank is completing final studies on the feasibility of a $30 million project to build a modern highway to connect Talanga-Juticalpa-Catacamas in the Department of Olancho. The Bank is to provide 75 percent of financing and the Honduran Government the rest.

The IDB provided Honduras with a $12.5 million loan in early 1976 to be used to pave the highway approaches of El Progreso as well as the Santa Rita-El Negrito-Morazan-Yoro road. Work on this project is expected to be initiated in late 1976 and be completed within 24 months.

The government has signed a memorandum of understanding with IDB which calls for expenditure of $49.6 million to construct 260 kilometers of roads in Olancho province as part of the previously mentioned pulp and paper project. Final studies of a 35-km. road from Corocito (proposed site of the pulp plant) to Puerto Castilla are now under way.

As part of the pulp and paper project, the World Bank will be called upon to provide approximately $15 million to finance construction of a modern port through which lumber and agricultural exports can pass. The General Manager of the Honduran Port Authority has stated that the port should be in operation during the first half of 1979.

This heavy construction activity is expected to produce strong demand for large earthmoving machinery and heavy construction supplies.

Tourism: The Honduran firm Compania General Hotelera, S.A. plans to begin construction of two 200-bed hotels in the northern area of Honduras in late 1976, one on the beach near the city of Tela, the other in San Pedro Sula. Approximately $11 million will be spent on construction and furnishing of these two hotels.

The Honduran Government estimates that it will spend $55-60 million on construction of the Tornasal Tourism Project between 1976 and 1985. This project will consist of several luxury hotels, condominiums, restaurants, recreation facilities, etc. Final study is expected to be completed before the end of 1976, with infrastructure work to begin in early 1977 and construction of the hotels, etc. in early 1978. The World Bank and Central American Bank for Economic Integration are expected to provide financing for this project.

Other important tourism projects include modernization of hotel and travel facilities at the Ruins of Copan and on the Bay Islands.

These projects are expected to result in a series of significant sales opportunities for U.S. manufacturers of hotel and motel supplies and equipment, small boats, scuba diving equipment, and other resort and recreation equipment.

Electric Power: The National Electrical Energy Enterprise (ENEE) will continue to expand the national electric grid throughout rural areas of Honduras in 1976 and 1977. The U.S. Embassy has already reported several government tenders resulting from this activity. Items being sought by ENEE are mainly electrical hardware, cable and transformers.

ENEE has encountered financing difficulties regarding its plan to construct a 1,730,000 kwh/year hydroelectric dam at El Cajon. The estimated cost of that project is now put at $350 million. Construction, originally scheduled to begin in mid-1976, is not expected to commence for at least two more years.

Selling points

U.S. products continue to face tough competition from Western European and Japanese exporters in the Honduran market. U.S. products sometimes suffer because they offer more quality (and a correspondingly higher price) than most Honduran importers want. With very few exceptions, it is the lowest cost product which dominates the Honduran market. Secondary selling points are: availability of credit, rapid delivery, and availability of spare parts and service.

McNally advises people interested seriously in this market to make frequent trips from the home office. This is important in order to be able to monitor closely the activity of local representatives and to establish and maintain personal relationships with key business and government leaders. The U.S. Embassy in Tegucigalpa welcomes U.S. business visitors and stands ready to provide whatever assistance possible to make the visit successful.

Trade Opportunities Brighten As Greece Resumes Growth

After two years of economic uncertainty, triggered by the worldwide slump beginning in fall 1973 and exacerbated by the Cyprus emergency in the summer of 1974, Greece now appears poised for a new period of economic growth, reports Arthur J. Laemmerzahl, Commercial Officer at the U.S. Embassy in Athens.

The growth rate is likely to be more modest than the previous expansionary period, but with significant pledges of assistance from the United States and the EEC, as well as the prospects of domestic oil to help reduce its import bill, officials are optimistic that Greece will be able to successfully complete the modernization of its economy necessary for full membership in the EEC.

This growth—the five-year plan now under preparation assumes growth rates of 6 to 7 percent per year through 1980—will afford significant opportunities for alert U.S. exporters. Certain areas of the economy ought to be especially watched, inasmuch as growth in these sectors appears both inevitable and necessary if Greece is to meet its targets for the future. These include transportation, agriculture and food processing, and tourism.

Transportation: Since ancient times, Greece's geography has been a major economic problem. Good overland transportation is made extremely difficult by rugged and mountainous terrain, and much of Greece's total surface area is separated into islands scattered throughout the Aegean and Ionian Seas. Great strides have been made since the war in linking the country, with improvements in surface and air transportation, but much remains to be done to effect a more complete integration of the economy. Among projects presently planned and/or under way are:

- Athens Airport: Despite recent improvements to the landing field and terminal facilities, the present airport at Ellinikon is rapidly approaching the limits of its capacity. Relocation of the existing Athens Airport to Spata has been proposed and a master plan is under preparation. Until completion of the Spata Airport, improvements in the Athens Airport are also planned in order to meet increasing traffic requirements.
- Athens Subway: Downtown Athens is rapidly becoming choked with vehicular traffic, and the one existing electric (partly underground) railway is inadequate to divert the increasing flow. A new subway has been under consideration for some time, and an American consortium has helped prepare the feasibility study. The government is now moving into the design stage, again with an international tender.
- Port expansion: Improving transportation links with Europe and the Near East also calls for improvement of port facilities. In addition to expansion and improvements at Piraeus, Iraklion and Volos, there is an ambitious plan for a new port at the mouth of the Axios (Vardar in Yugoslavia) river to service the increasing flow of traffic generated by the industrialization of Northern Greece and improved ties with Greece's Balkan neighbors.
- Railroad improvements, including electrification: In an effort to divert road traffic to rail, and to increase capacity of the railroad networks, Greece's five-year plan will call for electrification of the Athens-Thessaloniki main line, and widening to standard gauge the line between Athens and Patras. Roadbed improvement and some new construction, including amalgamation of the two Athens terminals, is also called for.
- Highways: The World Bank will extend to Greece a $30 million loan to finance a $64 million roadbuilding program. The program provides for rebuilding of the Patras-Pyrgos-Olympia highway; procurement of highway maintenance equipment worth $12 million; and preparation of studies for new highways.

In all these fields, American technology should be able to help supply Greece's needs, whether in technical studies or design engineering, or in modern equipment such as cranes, highway maintenance equipment, airport communications and navigation equipment, locomotives, etc.

Agriculture and Food Processing: Greece's agriculture has made great strides since the war, and Greece is now self-sufficient (and even an exporter) of such staples as wheat and rice. Although the total area available for cultivation is small, Greek farmers do produce an exportable surplus of certain fruits, vegetables and wines.

The proper exploitation of Greece's potential as a supplier of fruits and vegetables to Northern Europe will call for a major drive to modernize and expand capacity for handling fresh produce, food processing, canning and freezing. Because of Greece's location at the Southeastern tip of Europe, transportation of fresh produce to Northern Europe has been a greater problem for Greece than for such countries as Italy and Spain, and improved methods for handling fresh produce are urgently needed.

In addition, food processing, canning, and juicing are currently relatively underdeveloped in comparison to Greece's future partners.

Attractive opportunities should exist for the following types of equipment: packers, shakers, juicers, sorters and graders, refrigeration and freezing equipment, packaging machinery, drying and dehydration equipment, washers, mixers and batchers, and crushers and blenders.

Tourism: Greece's natural beauty, native hospitality, relatively reasonable prices, and historic and cultural landmarks make it an unusually attractive tourist haven. As other Mediterranean countries have found, tourism development can be self-limiting: the more hotels, the more crowded the beaches, the fewer people want to come back. Greece, with the longest coastline in Europe, has ample room for further development of tourism without becoming overdeveloped.

Demand for additional tourist facilities, moreover, is especially strong, and growing. This year, over 4 million tourists are expected to visit Greece, compared to 3.2 million in 1975. Tourist earnings in 1976 are expected to reach $900 million, compared with $622 million in 1975. The number of beds presently available in Greece is 185,000; this is expected to rise to 215,000 during the year.

Of particular interest to American suppliers is the desire of the Greek Government to create convention facilities and encourage the construction of additional luxury hotels in Athens. Athens has many advantages as a convention center, unexploited until now because of a shortage of such facilities. Advantages include excellent communications, location astride airline routes to the Near East and Africa, and a mild year-round climate. A factor to bear in mind is that more Americans than any other group of tourists visit Greece and they spend more per day than any others. Greek hoteliers are therefore conscious of the necessity for a high level of comfort and sophistication in new hotel construction. Among products likely to be of interest are: airconditioning and refrigeration equipment, water purifiers, pool supplies, kitchen and food service equipment, audio equipment, and electronic conference facilities.

In this same connection, the government's determination to halt the spread of industrial pollution and to clean up certain areas already suffering from problems of air and water pollution should be of interest to American companies, who have established world leadership in the field of pollution control. A new central government agency to deal with this problem has been created, and indications are that legislation to be proposed will provide very strict standards.

The embassy will endeavor to keep U.S. industry informed of specific projects and opportunities in all these fields through its reporting to the U.S. Department of Commerce. Similarly, the U.S. Department of Commerce will sponsor several events in Greece to help keep Greek businessmen and technicians abreast of the latest U.S. offerings.

Prospects Are Encouraging For U.S. Sales To Indonesia; Financing Remains Important

Despite a tight financial outlook resulting from debt problems of the state oil company Pertamina, Carleton C. Brower, Economic/Commercial Officer at the U.S. Embassy in Jakarta, reports that prospects for U.S. exports to Indonesia remain encouraging, especially in certain priority sectors.

Contrary to early expectations of an oil boom year, 1975 turned out to be difficult for the Indonesian economy. Oil earnings—which account for three-quarters of total export receipts—registered a 3 percent decline. At the same time, depressed world commodity prices reduced non-oil export earnings (most importantly timber, rubber and copper) to $1.8 billion—18 percent below the year before. Imports, meanwhile, rose about 30 percent last year, slashing the trade surplus to one-fourth of 1974s. This, together with a chronic services' deficit, resulted in a current account gap of about $1.7 billion, in contrast to a small surplus of 1974.

The government in 1975, furthermore, had to bail out the state-owned oil monopoly, Pertamina, to the tune of at least $1.55 billion in foreign exchange for paying off short-term obligations. As a result of these pressures the government: borrowed more than U.S.$1 billion of commercial five-year loans for revenue purposes; scaled down existing major projects; and adopted a go-slow policy with new ones. Foreign reserves fell to a low of some U.S.$350 million last September, but bottomed out and have risen somewhat.

Inflation is still running at 20 percent per year—a rate disturbingly higher than in most of Indonesia's neighbors and trading partners. Nevertheless, gross national product is expected to continue to increase at a rate of about 7 percent per year in real terms. And significantly for sales of U.S. goods and services, imports should continue growing fairly rapidly.

Although the government moved firmly and effectively in dealing with the Pertamina debt crisis, there will be long-range adverse effects. The World Bank expects the debt service ratio to peak at almost 20 percent in 1979, imposing constraints on Indonesia's finances for the next few years.

For the coming year, at the June 1976 meeting of the International Government Group on Indonesia (the IGGI, made up of the World Bank, IMF, Asian Development Bank and 14 bilateral donors of funds for economic development), the World Bank called for new IBRD and ADB commitments at $700 million; bilateral donor credits on soft terms of $700 million; and another $700 million in government commercial credits. The donors responded generously, if not quite at the target levels, and it appears that the needed funds will be available.

Demand has now begun to improve for oil and other exports such as timber, rubber and tin. The rice harvest looks good, and stocks are satisfactory. However, President Suharto's austere budget of "caution and vigilance" and the effects of the tightened economy have been felt throughout the business and banking community. The rate of improvement in the Indonesian economy is very much dependent on recovery in the industrialized world.

Despite the generally unfavorable 1975 picture, a number of factors have combined to produce strong growth in U.S. exports to Indonesia. These include large Eximbank loans; continued, if reduced, investment in the oil sector; continuing aid; competitiveness of U.S. products; and procurement for major projects.

U.S. exports to Indonesia in 1975 rose by 53 percent to $801.1 million. The main item was machinery, up 68 percent to $317.9 million; leaders were construction and mining machinery and electric power machinery. Chemical fertilizer was second with $87 million, followed by transport equipment, mostly aircraft ($79.6 million), iron and steel ($52.8 million), cotton ($54.2 million) and wheat $49.6 million).

U.S. imports from Indonesia in 1975 rose by 32 percent to $2,220.6 million, resulting in a bilateral trade balance of $1,419.5 million in Indonesia's favor. Indonesia's biggest export to the United States by far was crude petroleum—$1,812.3 million, up 51 percent from 1975.

U.S. exports to Indonesia in 1976 will total well over $1 billion—a strong growth but at a lower rate than last year. Best prospects for the future continue to be machinery and equipment for major projects, with an especially good outlook in textile machinery, cargo and materials handling and timber and wood processing.

U.S. firms now have an excellent opportunity to obtain a foothold in the Indonesian textile machinery and equipment market. Indonesia plans to expand its textile industry to provide employment as well as clothing for its more than 130 million people, and reach self-sufficiency. The emphasis will be on expanding yarn and textile production.

To reduce dependence on imports of raw materials and intermediate goods, investment will also be made in petrochemicals, fiber manufacturing, rayons and cotton growing. The clothing industry will be promoted as will dyeing, finishing and printing.

U.S. firms have thus far failed to obtain any significant share of this attractive market except for raw cotton. Manufacturers of textile and garment manufacturing equipment and machinery should send sales representatives who can speak authoritatively about financing.

Opportunities also exist to capture a share of turnkey engineering/construction and equipment supply contracts for new wood and products processing plants. Indonesia has the most extensive tropical hardwood stands remaining in the world, and government policies now demand industrialization of the forestry sector. Experts place the maximum sustainable yield of Indonesian forests at between 21 and 24 million cubic meters, and the government seeks domestic processing of 40 percent of this by 1979.

The government provides significant

NICKEL PROJECT NEARS COMPLETION—*P. T. International Nickel Indonesia is completing work on its Stage I nickel processing facilities, above, near Soroako on the island of Sulawesi. Output of this complex will be 16,000 metric tons of nickel a year. Stage II, set for 1978, will raise output to more than 45,000 metric tons.*

incentives to invest in wood processing facilities. Its emerging export promotion strategy for plywood, sawn timber and allied products will necessitate higher standards than currently prevail in the domestic market; this implies improved techniques, and presumably more modern equipment. Finally, opportunities for Indonesian timber exports are opening up in Europe as supplies of African hardwood become depleted.

Materials handling equipment is at the core of much future Indonesian economic development. There are $12 to $13 billion worth of major agribusiness, industrial and mining projects planned for the next five years, the products of which require substantial materials handling. The total tonnage of all products handled in Indonesia is expected to double by 1980.

Materials handling equipment will represent a major portion of foreign exchange costs for port projects, and a significant portion for other major projects. Also, major inland transport and warehouse related materials handling equipment purchases are now under way. U.S. firms have an excellent chance to capture a significant share of this emerging market.

Those firms already in the Indonesian market know that they must work very closely with their agents, keep in touch with at least one of the four American bank branches or five American banks with representative offices, maintain contact with the U.S. Department of Commerce, and visit the Embassy's Economic/Commercial section in order to keep abreast of developments in Indonesia. Those firms not yet introduced to this market, but becoming aware of the opportunities which it offers, should visit the nearest Department of Commerce District Office to review prospects.

If seriously interested, officials should be prepared to visit the country for a firsthand look. Such visits should not be perfunctory—communications are bad, government officials harried and information questionable, and serious visitors need time to overcome these factors to move toward a successful visit.

A key factor is the need for such visitors to speak authoritatively not only about their products but also about financing. Awareness of the banks with which their company works, possible terms to be offered, use of FCIA, etc., are all among the most important elements in a sale. Such visitors should also be equipped to talk about after-sale service, possible training and technical help built into the sales package. European, Australian and Japanese competitors often succeed on the basis of these factors and Americans fail because they are not equipped to speak authoritatively on them. The Embassy is ready to assist with detailed briefings and leads.

INTERNATIONAL BUSINESS REPORTS

Iran: The Chase World Information Series on Developing Business in the Middle East and North Africa. Published by the Chase World Information Corp. 183pp. $265.

For those who wish to take advantage of the rapidly expanding trade and investment opportunities in Iran, this publication (the first in a series covering the entire Middle East and North Africa) provides the best practical introduction to the Iranian business environment available in one short volume. While this study highlights key features of Iran's cultural and political context as well as the most prominent features of the agricultural, industrial and petroleum sectors of the economy, its most useful contribution is in the wealth of practical information for the business person arriving for the first time in Tehran. Topics ranging from Iranian cultural sensitivities of which the negotiator should be aware to steps necessary for applying for foreign capital importation are treated in readily usable format. Although some of the statistical presentations suffer from the constant change which is a hallmark of the Iranian economy, they offer a convenient reference for this key Mid-East market.

Write: John A. Lewis, Chase World Information Corp., 1 World Trade Center, Suite 4627, New York, N.Y. 10048.

Managing the Company Tax Function. By Arnold J. Olenick. 321pp. $29.95.

Reference book designed to help corporate tax managers cope with the problems and cost of federal, state and local tax compliance. Arranged by type of function—from organizing the tax work through tax preparation, planning, filing and audit—and includes sample tax forms, charts and checklists, and model forms and worksheets.

Write: Prentice-Hall, Inc., Englewood Cliffs, N.J. 07632.

Country Market Sectoral Survey on Nigeria. Published by the Department of Commerce in the International Marketing Information Series. 190pp. $2.60.

Assesses the current dimensions of Nigeria's $6 billion import market and analyzes what U.S. industry might supply over the next five years, in terms of Nigeria's Third National Development Plan. Spells out implications for U.S. trade and investment in 24 growth sectors of Nigeria's boom, oil-based economy: electric power, communications, petroleum, mining, financial institutions, education, health care, aviation, commercial road transport, railroads, water transport, building construction, road construction, water and sewer systems, chemicals, construction materials, textiles, printing, manufactured foods, crops and crop processing, livestock and animal products, fishing, forestry and wood processing, semi-arid land development.

Write: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Calendar For World Traders

Sept. 15-17—New York — World Trade Institute seminars on Solving Tax Problems in Compensating Employees Overseas and International Accounting.

Sept. 22—New York—International Executives Assn. seminar on The Initial Marketing Approach.

Sept. 22—Boston—International Business Center of New England seminar on Export Documentation and Traffic—Part 1, Marriott Motor Hotel, Newton, Mass. For information, 617-542-0426.

Sept. 22—Greenville, S.C.—Export-Import Bank seminar, Sheraton (Downtown) Inn. For information, Columbia District Office, 803-765-5345.

Sept. 27—Madrid, Spain—International Roundtable Conference and Seminar on Finance, Credit and Collection Problems, Eurobuilding Hotel. Sponsor: FCIB/Europe. Contact: FCIB-NACM Corp., 475 Park Ave. South, New York, N.Y. 10016.

Sept. 27—Washington, D.C. — International Marketing Institute seminar. Roger Stechschulte of Commerce's Bureau of East-West Trade will speak.

Sept. 28—Dayton, Ohio—Sell in Venezuela seminar. Sponsors: Cincinnati Commerce District Office, University of Dayton. For information, Ralph Jones, 513-529-4626.

Sept. 29—Detroit—Sell in Venezuela seminar. For information, Commerce District Office.

Sept. 29—New York—International Executives Assn. seminar on Establishment of an Export Department.

Sept. 30—St. Louis—Sell in Venezuela seminar, Cheshire Inn, Clayton, Mo. Sponsors: Commerce District Office, World Trade Club, Regional Commerce and Growth Assn. For information about this seminar call Paul Bergman, 314-425-3303.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about upcoming trade exhibits and trade missions, licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, and details on major construction and expansion projects.

U.S. Promotions Abroad

For more facts on these and other U.S. exhibitions write: Director, Office of International Marketing, Rm. 4015, U.S. Department of Commerce, Washington, D.C. 20230. For trade missions: Rm. 6051, U.S. Department of Commerce, Washington, D.C. 20230.

Technical Seminar on Machine Tools. Czechoslovakia, Hungary and Bulgaria. Nov. 6-20. These countries offer growing markets for U.S. manufacturers of machine tools. Company participants will present technical papers in each country to a highly select audience of buyers, technicians, and end-users. Contact Judith Robinson, 202-377-3376.

Computers and Peripheral Equipment Exbn. and Seminar, U.S. Trade Center, Sydney. Nov. 8-12. The Australian computer/peripheral market is currently valued at over $211 million. The U.S. is Australia's leading supplier with a market share of about 50 percent. However, competition is intense with strong competition coming from the U.K., West Germany and Japan. Total computer consumption in New Zealand totaled $14 million in 1974; the U.S. accounted for $4.2 million. An annual growth rate of 10-15 percent is predicted. Call Don Mathes, 202-377-4957.

Technical Sales Seminar in Instrumentation. New Delhi. Nov. 22-Dec. 11. The Indian Government has accorded priority to expansion in the heavy industrial sectors, particularly petroleum exploration, production and refining; fertilizer production; and petrochemicals. In addition, there is increasing emphasis on scientific research and development and providing modern medical services on a mass basis. The demand is for sophisticated instrumentation required to fill technological gaps and achieve economic objectives. Foreign exchange is readily available for this purpose. Will be held in conjunction with the first World Instrumentation Symposium and International Trade Exposition (WISITEX) which opens in New Delhi, Nov. 22. William J. Bushwaller, 202-377-4511.

Engineering Design Components. U.S. Trade Center, Milan. Nov. 23-27. Components, materials and technology in the machinery, automotive, aerospace, and other equipment and electro-mechanical industries will be featured. Transmission components, hydraulic and pneumatic components, electrical and electronic controls, special materials, shapes and forms, joining systems and components are included. U.S. products have tremendous potential in this market. Runs concurrently with BIAS, international automation engineering exhibition, at the same fairgrounds. J. Michael Springmann, 202-377-4975.

HEVAC-76 International Trade Fair. Tehran. Nov. 24-30. The United States is still Iran's No. 1 supplier, claiming better than a 20 percent share of a market the U.S. Department of Commerce predicts will go to $40 billion by 1980. The rapid increase in population, the jump in national income as a result of oil price increases and a dramatic rise in the standard of living within the past decade have considerably intensified construction requirements in Iran, particularly in housing. The market for HEVAC equipment has grown from $150 million in 1975 to an estimated $340 million in 1976. According to the Fifth Development Plan (1973-1978), approximately $6 billion is targeted to improve the housing situation. In order not to let these orders go by default to foreign competition, the U.S. Department of Commerce is planning this showcase for heating, ventilation, air-conditioning, plumbing, refrigeration and sanitation equipment, architects/engineers and contractors. Call Franc Manzolillo, 202-377-2991.

Electronica 76. Munich. Nov. 25-Dec. 1. Germany's total consumption of electronic components is predicted to exceed $1.7 billion in 1977, while the market for electronic production and test equipment is expected to reach $343 million. In both categories, imports account for more than 40 percent of the entire market and the United States is the country's leading supplier with a share of about 28 percent. Best sales opportunities exist for U.S. exporters of color TV tubes, capacitors, resistors, integrated circuits, diodes, transistors, production and test equipment, and materials. Best market prospects are in computers, measuring and testing instruments, industrial equipment, and medical electronic equipment. Don C. Schmadel, 202-377-2177.

Telecommunications Equipment & Systems Exhibit (JEEP). Paris. Nov. 29-Dec. 2. Significant opportunities for exports should arise in the entire telecommunications market as a direct result of the French Government's recently announced massive program to increase the telephone system's capacity some 300 percent during the period 1976-1980; about $10 billion will be expended on equipment purchases. Some 6-8 new-to-market firms will be eligible for this event. Contact Ned Krause, 202-377-5381.

Analytical Instruments for Science and Industry Exhibition. U.S. Trade Center, London. Nov. 29-Dec. 3. The British market for analytical instruments for science and industry was valued at $85 million in 1974. Expanding technology, increased investments by industrial and government laboratories, and a general economic recovery should push the market to $100 million in 1979. Imports from the United States, which account for more than 25 percent of the total market, are expected to jump from $22 million in 1974 to $32 million in 1979. U.S. firms are the leading import suppliers of four categories of products--automatic analyzers, gas chromatographs, oscilloscopes, and atomic absorption spectrophotometers—and have obtained a large share of the British market through their technological superiority and effective marketing practices. Robert L. Bradshaw, 202-377-4461.

Metalworking, Finishing Equipment and Machine Tools Product Literature Display. Johannesburg and Cape Town. Nov. 29-Dec. 8. In 1972, South Africa's apparent consumption of metalworking, finishing equipment and machine tools registered $68.8 million; for January-September 1975 this figure rose to $161.1 million. Local production accounts for only about 6 to 7 percent of these market figures. Over the last few years, there has been substantial growth in the local industries that rely on the machine tool industry, partly because of the need to upgrade quality as a result of the increasingly stringent local programs supporting South African industry. This product literature display should provide an excellent opportunity to attract the attention of South Africa to the latest advances in technology in U.S. products. Call 202-377-3973.

Metalworking Trade Mission to Korea, Taiwan and the Philippines. Nov. 29-Dec. 10. The metalworking industry is considered one of Korea's best prospects for U.S. exports. Korean imports of machine tools and metalworking machinery increased from $63 million in 1974 to $84 million in 1975. Taiwan is a good customer of the U.S. machine tool industry, with the U.S. ranking second to Japan, the leading supplier. Taiwan's efforts to decrease its dependence on Japanese imports may enable the U.S. to increase its share of the machine tool market. U.S. machine tool exports to Taiwan were valued at $3.9 million in 1974 and $5.2 million in the first ten months of 1975. Industrial activity is expanding steadily in the Philippines, thereby increasing market opportunities for U.S. metalworking equipment, especially production type. Philippine imports of metalworking and finishing machinery and equipment exceeded $23 million in 1974, up from $12 million in 1973. Over the next few years, the average annual growth rate is estimated at 15 to 20 percent. Mollie Cleveland, 202-377-4705.

Pulp, Paper and Converting Machinery and Equipment Trade Mission to Brazil. Dec. 1-10. The Brazilian pulp and paper industry has grown rapidly over the last ten years in order to satisfy an exploding domestic demand. Production doubled in the 1967-1973 period alone. Foreign investors have begun showing interest in Brazil as a source of pulp and paper for the world market over the medium and long-term. To date, exports have not been significant, and imports have grown substantially. However, ambitious plans have been announced to make Brazil both self-sufficient in paper and a major exporter of pulp (two million tons) by 1980. Investments of $2.75 billion will be required for achievement of the 1980 goals. Forty percent of this, or $1.1 billion, has yet to be committed, according to government figures. Longer-term goals (over the next 20 years) see investment of $17 billion in the pulp and paper industry and export earnings of $51 billion. Call William J. Bushwaller, 202-377-4511.

U.S. Exhibition in Second Dakar International Fair. Dec. 3-12. In 1974 this exposition attracted 500,000 visitors with 670 firms from 44 countries participating. Senegalese development expenditures of over $500 million a year, rising interest in U.S. sources of supply, an improved U.S. competitive position due to the recent ending of EEC reverse preferences, and extensive regional sales prospects, provide enterprising American firms an excellent opportunity for market penetration and development. Commerce's pavillion will accomodate 20 U.S. manufacturers of diverse equipment. Philip Michelini, 202-377-5148.

Catalog Exhibitions on Do-It-Yourself Equipment and Products. Brussels, Dec. 4-12, and Utrecht, Jan. 24-30. These shows will be organized by the U.S. Department of Commerce at two major European exhibitions, "Hobby 76" at the Rogier Center in Brussels and "Karwei 77" at the Royal Netherlands Industries Fairgrounds in Utrecht. The growing cost of services related to home rehabilitation, limited expansion of new construction, inflation and tight money are encouraging growth in the do-it-yourself field in both Belgium and the Netherlands. These trends also have made U.S. products more price competitive in Europe and have created an excellent marketing opportunity for those manufacturers selling do-it-yourself equipment or products. Call 202-377-3973.

Hospital and Medical Equipment and Supplies Catalog Exhibit. Port of Spain, Trinidad and Santo Domingo, Dominican Republic. Dec. 6-10. Both countries are embarking on and updating programs in the field of health care. Trinidad, entirely dependent on foreign suppliers for its hospital and medical equipment and supplies, has obtained sizable loans from the World Bank and the Inter-American Development Bank to implement its programs. The Dominican Republic is attempting to expand its health care into the rural areas, while fortifying existing facilities and building new ones in its cities. Both countries place increasing emphasis on the purchase of medical and surgical equipment, hospital equipment and disposables. These are markets where American exporters are already doing well and are expected to do much better, due to proximity and due to Trinidad's recent alignment with the U.S. dollar and abolition of Commonwealth Preferences in its tariff structure. Call 202-377-3973.

Market Research In India

In conjunction with Catalog Shows in New Delhi and Bombay Jan. 10-20 (see item on this page), the U.S. Embassy in New Delhi has completed three market research reports on the rapidly growing electronics industry in India. The reports outline opportunities for U.S. manufacturers of computer peripheral, electronic components and production equipment, identify potential customers and agents, and offer other marketing data.

Priced at $10 each, they are available from the National Technical Information Service, U.S. Department of Commerce, P.O. Box 1553, Springfield, Va. 22151. Identify them as follows: India — Market Research Report on Computer Peripheral Equipment—DIB No. 76-06-509; India—Market Research Report on Electronics Components—DIB No. 76-07-512; India—Market Research Report on Electronic Industry Production and Test Equipment—DIB No. 76-07-513.

Industrial Process Controls Exhibition and Seminar. U.S. Regional Trade Center, Singapore. Dec. 6-10. The Singapore Government's plans for a major petrochemical complex and new construction in the electrical energy sector are expected to push sales of process control instrumentation to $12.5 million by 1978. Singapore's requirements for these products are met entirely by imports. To participate contact J. Lee Barnes, 202-377-3893.

ECOLOGY '77—Environmental Purification and Pollution Control Instrumentation and Equipment. U.S. Trade Center for Scandinavia, Stockholm. Dec. 6-10. Sweden, Norway, Denmark and Finland, currently and individually warring against pollution, have programmed an aggregate total of $2 billion plus to be spent on environmental protection by 1984. A significant portion of this amount will be earmarked for the purchase of instrumentation, equipment and controls. Louis Quay, 202-377-3089.

Offshore International Exhibition. Birmingham, England. Dec. 7-10. The continuing development of North Sea oil resources offers good opportunities for U.S. suppliers of oil and gas field exploration, production and transmission equipment, instruments, systems, supplies and services. U.S. exports to the United Kingdom alone in 1975 totaled $32 million, up from $19 million in 1974 and $11 million in 1973. Demand is highest for oilfield equipment and pipe, but sales opportunities also exist for a wide range of supportive products, e.g., floating structures (rigs, barges, vessels, tanks, etc.), helicopters, telecommunications equipment, valves, processing and field instruments, welding equipment and drilling fluid. At least five new North Sea fields are expected to open by the end of this year. A $3 billion market for products and services is expected in 1976, with the total rising to $5 billion by 1980. Official exhibits will be mounted by many countries. George A. Kemp, 202-377-3713.

Advanced Business Equipment and Systems Exhibition and Seminar. Taipei. Dec. 13-17. This JEEP (Joint Export Establishment Promotion — for new-to-market participants only) will focus on a rapidly growing market in the Republic of China. The economy in Taiwan has recovered strongly from the recent world recession. Imports of U.S.-produced business equipment and systems are expected to reach $17.5 million by 1979—up from $11.2 million in 1974. Peter Wilson, 202-377-4227.

Building Products and Construction Equipment Catalog Exhibit. Philippines, Thailand and Malaysia. January. All three countries are initiating aggressive building programs and expect to import most or all of the building products and construction equipment required. Pre-engineered and modular construction are either established techniques or are gaining wide acceptance in all three markets. Reinforced concrete, wood-frame, hollow building block, and structural steel are the common building techniques. Aluminum and wood are used for window and door frames. The program in the Philippines is the most dynamic, with an expected 40 percent growth in consumption of building products and construction equipment by 1980. The programs of the other two are highly promising, enhanced further by the fact that they import nearly all that they use in this field. Call 202-377-3973.

Pet Products Exhibit (JEEP). Paris. Jan. 10-13. By 1985, France is expected to be the largest market in all of Europe for pet foods and accessories. Its 51 million residents currently care for some 7.5 million dogs, 7.5 million cats and the contents of 2 million bird cages and 1 million aquariums. One family in two has at least one pet. Because of the market's growth rate, good opportunities exist for American firms to introduce new products. Some 6-8 new-to-market firms will be eligible for this event. Ned Krause, 202-377-5381.

Data Communications Equipment Exhibition. U.S. Trade Center, London. Jan. 10-14. The U.K. data communications market, presently estimated at $150 million, is expected to reach $175 million by 1980. Imports account for over 90 percent of domestic consumption of this equipment, with the U.S. share above half. Items to be emphasized are computer peripheral controllers and interface devices, combination I/O devices and processors, input equipment, output devices, and parts and accessories of data communications systems. Commerce will provide a complete range of services including market promotion, agent/distributor search, booth design and construction, and marketing assistance. Potential licensees and joint venture partners will also be invited. In 1974, sales results at the same event were almost $2 million off-the-floor with an expected $25 million for the following 12 months. Anita F. Brownstein, 202-377-4443.

Electronics Production and Test Equipment and Electronic Components Catalog Exhibit. New Delhi and Bombay. Jan. 10-20. India is currently making a determined effort to accelerate the overall development of its electronics production capability. Indian planners have recognized that components constitute the essential base for the building up of a domestic electronics industry, and, as a result, the market for production equipment has expanded greatly. The Indian Government Department of Electronics is committed to develop a viable indigenous computer industry by establishing production facilities for mini- and midi-sized systems. The U.S. currently holds 75-80 percent of the total Indian import market for production and test equip-

ment, and in 1974 the U.S. accounted for 46.5 percent of Indian imports of electronic components. Both markets should be expanding greatly. Call 202-377-3973.

Timber Industries Equipment Catalog Exhibit. Madagascar, Zaire and Central African Republic. Jan. 13-25. Madagascar, Zaire and the Central African Republic are planning major investments in their timber industries in the near future. "Timber industries" include those involved in logging, preparation of timber for construction or pulp and paper, preparation of plywood and veneer, or woodworking for housewares, handicrafts and other wood articles. These countries manufacture little, if any, of the equipment necessary for these industries. Although there is immediate sales potential only in the C.A.R., Madagascar has taken a World Bank loan for a major pulp mill project within the next five years, and Zaire is in need of retooling and expanding its timber industries in the near future. C.A.R. and Madagascar have eliminated tariffs against the U.S., and this, combined with devaluation of the U.S. dollar, has made U.S. timber industries equipment much more price competitive. Call 202-377-3973.

Microwave Technology and Test Instruments—Joint Export Establishment Promotion (JEEP). U.S. Trade Center, Paris. Jan. 19-21. With the French Government's recently announced plan to expend $30 billion during the next 5 years to modernize the national telephone system and with the recognized technical superiority of U.S.-made microwave products and test equipment, France promises to be a prime export market for U.S. manufacturers. Featured will be components, circuits, test and measurement instruments, equipment and systems, and antennae. Contact George Ruffner, 202-377-5381.

Motor Vehicle Maintenance Equipment, Replacement Parts and Supplies Exhibition. U.S. Trade Center, Mexico City. Jan. 25-28. The Mexican motor vehicle census has increased from 800,000 passenger cars, trucks and buses in 1960 to 3.2 million in 1974. Mexican purchase of motor vehicle replacement parts, service equipment and automotive chemicals was $194 million in 1974 and is expected to more than double by 1980. Mary R. Wiening, 202-377-4463.

Business Equipment and Systems Exhibition. U.S. Trade Centers, Paris, Jan. 31-Feb. 3; London, Feb. 8-11. These events will provide exceptional sales opportunities for American manufacturers. Past experience has shown that they attract executives influential in the purchase of equipment. The U.S. Trade Centers in Paris and London provide an effective and economical means of reaching buyers or setting up distribution. Exhibitor's contribution fee is $900 for companies new-to-market and $2,000 for those already established. Dwight L. Umstead, 202-377-4414 or 2177.

Avionics and Ground Support Equipment Technical Sales Seminar. Greece, Italy and Yugoslavia. Feb. 1-10. Seminar sessions will be conducted in Athens, Rome and Belgrade. "State of the art" presentations emphasizing the latest technological achievements in specific areas of avionics and ground support equipment will be given. Product categories to be included encompass communications such as traffic controls and flight instrumentation such as navigational aids commonly found in aircraft. Also, terminal support equipment and products used to test and service aircraft and aircraft engines as well as baggage and cargo handling systems. Airport and aircraft requirements are expanding rapidly as efforts are made to modernize and improve air transportation systems in these countries. W. Bradley Tyrrell, 202-377-5285.

Medical Equipment Technical Sales Seminar. Czechoslovakia, Hungary, Poland. Feb. 1-15. Officials of these three countries have expressed deep interest in purchasing American medical equipment to improve their health care systems. This seminar will provide a proven, effective method to develop markets in Eastern Europe. Gary Roberson, 202-377-3376.

Hi-Fi Equipment Exhibition. U.S. Trade Center, Milan. Feb. 4-7. A special opportunity to show and sell the latest in hi-fi equipment is being offered to a limited number of American manufacturers. The U.S. Trade Center staff in Milan will launch an exceptional promotional campaign aimed at the widest possible trade and consumer audience exposure. AM-FM stereo equipment, amplifiers, speakers, synthesizers, electric guitars, tuners, microphones, headphones and complete amplifier systems are some of the items that will make up the exhibition. Call Mike Springmann, 202-377-2762.

Poultry Equipment Mini-Exhibit/Seminar. U.S. Commercial Office, Moscow. Feb. 7-10. The USSR's 1976-80 Five-Year Plan calls for a 100 percent increase in poultry production to be achieved by more mechanization and introduction of progressive techniques. New mechanized poultry farms and factories are planned and existing poultry farms are to be rebuilt using new machinery and technology that must be imported. Call Richard Bell, 202-377-5163.

Maritime USA '77—Port and Shipbuilding Exhibition. Kaohsiung. Feb. 7-11. The market for maritime, port and shipbuilding equipment in the Republic of China is growing at a rapid pace. Imports are estimated to reach $317 million by 1979. U.S. manufacturers are expected to supply one-third of this market, which consists of both government and private enterprises. Dave Horridge, 202-377-2798 or 5545.

Printing and Graphic Arts Exhibition, U.S. Trade Center, Tokyo. Feb. 14-18. Carefully researched projections of the Japanese market for printing and graphic arts equipment indicate a growth from $290 million to $335 million over the next three years. In 1979 total imports will approximate $83 million with the U.S. share exceeding $25 million. Imported equipment will include typemaking and typesetting machinery, presses, bookbinding machinery, and photographic equipment for the graphics industry. Purchasers will be interested in both new investment and replacement equipment. During the recession period of 1974-1975 imports of printing and graphic arts equipment registered a 20 percent decline; however U.S. exports in this product category for the same period increased nearly 20 percent, demonstrating growing demand. Cantwell Walsh, 202-377-4056.

Printing & Graphic Arts Equipment Product Literature Display. Johannesburg and Cape Town. Feb. 14-25. Trade sources indicate that for 1976-1980 a general growth rate of between 10 and 12 percent can be expected for printing and graphic arts equipment in South Africa. South Africa must import all of its printing and graphic arts equipment except for less sophisticated equipment such as sink units and washing equipment. Despite their appreciation for the quality and sophistication of American-made equipment in this field, a major share of the market goes to other suppliers. The primary reason is the lack of exposure of U.S. equipment in South Africa against the extensive promotion efforts conducted by U.S. competitors. This product literature display is important to offset these trends. Call 202-377-3973.

Agricultural Machinery & Equipment Exhibition. Guadalajara. Feb. 16-20. Mexican agricultural machinery and equipment imports are expected to exceed $110 million this vear and are projected to increase by 25 percent annually for the next three to four years. Guadalajara is the second largest city in Mexico and one of its major agricultural centers. Call C. M. Cummings, 202-377-4463.

Pro-In '77, International Design Engineering Conference and Exhibition. Duesseldorf. Feb. 18-21. This exhibition, the second of its kind in Germany, will feature components, materials and technologies. It is international in scope and is structured to reach a broad market. Included are: materials, shapes and forms, mechanical and power transmission components, fluid power-hydraulic and pneumatic, electric and electronic power and control and joining systems and components. Don Schmadel, 202-377-2177.

Communications Equipment. U.S. Trade Center, Tehran. Feb. 27-March 3. The government is in the process of establishing a modern national communications system, and plans to expand communications facilities by 1000 percent during the next ten years. Iranian imports of communications equipment amounted to $185 million in 1972 and are projected to increase to $400 million by 1980. The majority of this equipment will be imported, since Iranian manufacturing capability in the field is limited. Karl Reiner, 202-377-2952.

Equipment and Textiles for Sewn Products Exhibition. U.S. Trade Center, Milan. March 8-11. Italian imports of equipment and textiles exceed $53 million. The U.S. Government is offering American manufacturers of such equipment an outstanding opportunity to substantially increase the U.S. market share. Italian customers for equipment and textiles for sewn products are presently in a position where they must innovate and modernize facilities, and require the latest equipment and highest quality textiles. Marcia Griffin, 202-377-4509.

Motor Vehicle Maintenance Equipment, Replacement Parts, and Supplies Catalog Exhibit. Nigeria, Zaire and Zambia. March 9-22. As a result of Nigeria's oil revenues the government has devised a five-year $50 billion development plan to cover all sectors of the economy and raise the national standard of living. A substantial part of the plan will be devoted to maintaining and expanding infrastructure ($7 billion for highway construction alone). Nigeria is still wholly dependent on imports to satisfy motor vehicle maintenance equipment needs. Couple the Nigerian demand for imports with the surge in motor vehicle assembly plants and there will be strong demand for maintenance equipment and parts for the foreseeable future. Zambia is a landlocked country and thus has to rely heavily on land transport systems to move

copper to foreign ports. Zaire has been actively seeking direct foreign investment to enable it to grow. Foreign aid has been directed towards the agricultural and transportation sectors. 202-377-3973.

Industrial Instrumentation. Leipzig Spring Fair, German Democratic Republic. March 13-20. The second U.S.-sponsored exhibition at Leipzig will feature industrial instrumentation primarily applicable to the machine tool and processing machinery construction industry, the chemical industry, and the electrical engineering industry. Emphasis on these sectors is based on a realignment of economic policy goals calling for reinforcement of the raw materials base, an increase in and improvement of consumer goods to the public, and a production increase in the export sector. Buyers and trade officials from throughout Eastern Europe and the Soviet Union see this as their opportunity to inspect western goods and make purchasing decisions. Closing date: Sept. 30. Richard Bell, 202-377-5163.

Building Products and Systems, Construction Equipment and Architectural Hardware Exhibition. U.S. Trade Center, Tokyo. March 14-18. In 1974 the Japanese market for these products was $34 billion. The forecast for 1980 is $54 billion. New construction there is strongly influenced by western style and ideas. Private and public construction in 1974 was 2 million units valued at $67.9 billion. The 1980 projection calls for 3.1 million units at $110.1 billion. The Japanese seek advanced design interior and exterior building products of quality, and knowledge of building systems and methods that U.S. manufacturers can supply. The details for these conclusions are available in a market study prepared in Tokyo for the U.S. Department of Commerce. Robert Levine, 202-377-4056.

Commercial and Industrial Security Equipment Exhibition. London Trade Center, March 14-18, and Milan Trade Center, March 22-26. Strong and growing demand for this equipment has been identified by recent market research. The combined market for Italy and the United Kingdom amounts to about $350 million, of which about one third represents imported equipment. Products having high sales potential include intrusion alarm devices, security cameras, closed circuit television systems, access control equipment, fire detection alarms, automotive checking systems, anti-shop lifting devices, "bomb sniffers" and many others. Contact Sam Spaulding, 202-377-4508.

Tokyo Anti-Pollution Exhibition, TAPEX '77 Trade Fair, Harumi Pier, Tokyo. March 14-18. Japan's remarkable economic and industrial growth has spawned the worst aspects of high-paced industrial development with all forms of accompanying pollution: air, water, solid waste and noise. Demand for pollution control instrumentation alone will be $390 million by 1980 reflecting an annual growth rate of 15 percent. By the end of 1976, the Ministry of International Trade and Industry estimates, the market for all pollution corrective equipment will top $3.27 billion. Pollution technology offers opportunities for advanced U.S.-designed corrective equipment and instrumentation. The iron and steel, electric power, chemicals and primary metals industries project increased investments in pollution. Mara Yachnin, 202-377-5751.

Licensing, Investment Abroad

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Overseas Products and Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

0900—SENEGAL — Firm, established in 1972, seeks U.S. joint venture partner to expand into **integrated seafood processing operation.** American firm's investment would be about $255,000. Overseas Products & Investment Opportunities Staff, Office of Export Development, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76700.

2000—FRANCE—Large, well established firm seeks joint venture arrangement for **processing and canning any products for human or animal consumption.** Currently specializes in processing and canning fruits and vegetables, especially mushrooms and asparagus. Established 1964, employs 300. Products marketed in France and other EEC countries. For name and address of person to contact for additional information, contact Overseas Products & Investment Opportunities Staff, Office of Export Development, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76701. WTDR.

2035—GUATEMALA — Established company seeks license agreement from well-known U.S. company to produce **mayonnaise and salad dressings.** Currently produces edible oils and fats and also operates soap, detergent and glycerine plants. New products would be distributed in Guatemala and other Central American countries. Ing. Carlos Farner, Technical Director, Industria Guatemalteca de Aceites y Grasas, S.A., Via 3, 6-69, Zona 4, Guatemala City, Guatemala. P-76702. OPIC.

2041—JAPAN — Large chain of confectionery stores seeks latest U.S. technology and equipment to mass produce **frozen dough** for delivery to small bakeries. Operates six confectionery mills and over 300 chain stores throughout Japan. Sales in 1975 were $45 million. Overseas Products & Investment Opportunities Staff, Office of Export Development, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76703.

2522, 2542—UNITED KINGDOM—Company seeks licensing and/or joint venture arrangements to manufacture products either related to existing product range or new products suited to technical skills. Presently manufactures **library shelving, warehouse pallet racking, general storage shelving, filing cabinets, etc.** Employs 100. W. H. McKeown, Dir., Sperrin Metal Products Ltd., Draperstowne, Co. Derry, N. Ireland. P-76684.

2599—BELGIUM—Largest manufacturer of metal hospital beds seeks licensing arrangements to produce **latest types of equipment for hospital rooms, including beds, chairs and tables.** Has 600 employees and markets throughout EEC. Francis Mertens, Sales Manager, Joseph Mertens International N.V., Deurnestraat 208, 2510 Mortsel. P-76704.

2834, 2844—UNITED KINGDOM—Manufacturer of patented **medicines, toiletries, cosmetics, hair preparations, etc.,** seeks licensing arrangement for manufacture of similar products. Distribution network is done through wholesalers, drug stores and food and grocery outlets. A. E. Embleton, Managing Director, D.D.D. Company Ltd., 94 Rickmansworth Road, Watford, Hertfordshire WD1 7JJ. P-76685.

2844, 2834—ECUADOR—Seeks collaboration with manufacturer interested in granting names, capital, machinery and equipment, and technical assistance for production of **pharmaceutical preparations for human and veterinary use, and cosmetics and toilet preparations.** Sixty percent of capital to be contributed by local party. Manufacturing plant will be set up near Guayaquil, where water and electric power is available. Raw materials would be obtained from American partner. Pedro M. Hansen-Vik, P.O. Box 497, Guayaquil. WTDR. P-76686. OPIC.

3041—ECUADOR — Group of investors wishes to locate U.S. companies interested in joint venture or licensing arrangement for manufacture of **fan belts and radiator hoses.** Financing will be provided by investors, whose business interests are closely related to automobile industry. Abraham Frietman, Casilla 6444-CCI, Quito. Telephone: 249-676. P-76696. OPIC.

3131—AUSTRALIA — Largest manufacturer of footwear components seeks licenses to produce **molded sole and heel units for all type of shoes (particularly men's leisure and fashion shoes)** using rubber, P.V.C., thermo plastic rubber, polyurethane and E.V.A. D. B. Mack, Manager, Duncan Rubber Co. Pty., Ltd., 29 Smith St., Marrickville, N.S.W. WTDR. P-76705.

3312—THAILAND—Firm wishes to find partner for joint venture to produce **steel pipe for water distribution use.** U.S. partner should be able to supply equipment and technical know-how to manufacture steel pipe conforming to AWWA C201-6 Standard. Initially, production capacity will be in range of 100 tons per month. Sizes of pipe are 150-1,500 mm diameter

by 6 meters long. Equipment for applying cement mortar lining and hydraulic pressure test of 750 P.S.I. to be included. Equipment with possible conversion to produce petroleum pipe conforming to API Standard preferred. Mit Anantachart, Taveesin Engineering Ltd., Part., Boonmit Bldg., 8th Floor, 138 Silom Rd., Bangkok. WTDR. P-76697. OPIC.

3420 — SWITZERLAND — Small manufacturer of precision tools and dies, precision safety locks as well as general industrial equipment seeking to expand and diversify activity by introducing new lines for manufacture under license. Mainly interested in **items requiring metalworking operations** such as novel types of locks, hand tools, dies for use on metalworking machine tools, etc. Specializes in working of stainless steel. Lionel J. Amaury, Executive V.P., LUXAR S.A., P.O. Box 1860, Aigle. P-76687.

3494—BELGIUM — Manufacturer is interested in obtaining license for manufacture of **nuclear equipment valves up to four inches in diameter.** Interested American firms contact Pierre Boulanger, Commercial Engineer, CEDITEC A.S.B.L., 22 rue Buisseret, 7000 Mons, Telephone: (065) 33.45.08. In any correspondence addressed to CEDITEC, please use as reference the following: PB/JH/C8101/76595. P-76688.

3537—UNITED KINGDOM—Firm seeks licensing agreement for manufacture of **component parts for aircraft and associated equipment.** Presently operates as manufacturer, distributor and exporter of aircraft and avionics components, clay pigeon target launchers and model yacht accessories. R. A. Healey, Mng. Dir., Redthorn Engineering Works Ltd., College Lane, Weymouth, Dorset. P-76689.

3551—ARGENTINA—Firm seeks license to produce **fruit and vegetable dehydrating ovens.** Currently manufactures food processing equipment, employs 50 and has annual sales of about $400,000 annually. Provision of plant engineering services to food processors also included in company's activities. Sales territory includes Argentina and other Latin American countries under LAFTA program benefits. Sergio Fernandez, Dir., Establecimientos Metalurgicos Lopez Carrillo S.A., Sargento Cabral 151, 5519 San Jose, Guaymallen, Mendoza. P-76706.

3551, 3552—NETHERLANDS—Manufacturing licenses sought to produce **machinery and apparatus for food and carpet industries.** Products would be sold in EEC countries. Firm is experienced in these fields. J. G. A. Van Den Eijkel, Manager, Eur-O-Matic BV, S-Gravelandseweg 22, P.O. Box 25, Weesp. P-76707.

3559 — GERMANY — Leading manufacturer of **machinery and equipment for processing raw tobacco, cigarette, cigar and pipe tobacco and packaging machinery** seeks licenses from U.S. manufacturers of related new-to-German and European market products. Established 1854, employs 200. Copy of firm's brochure available on loan basis from Overseas Products & Investment Opportunities Staff, Office of Export Development, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. Wilhelm Quester, Maschinenfabrik, Postfach 420288, Berrenrather Strasse 282, 5000 Koeln 41. P-76708.

3569—GERMANY—Seeks license and/or joint venture agreement to manufacture **centrifuges.** Currently produces centrifuges for continuous de-oiling of metalworking chips and also centrifuges with automatic cycle control. Ms. Doris Atkind, Trade Promotion, European-American Bank & Trust Co., 10 Hanover St., New York, N.Y. 10005. P-76712.

3600—ITALY—Firm performing manufacturing and turnkey contracting in **installation of mechanical, electrical and instrumentation for industrial plants, electrical generating plants, electrical transformer stations, electrical transmission lines, and petroleum industry** with workforce of 1,300 and 200 engineers is interested in subcontract, joint venture and manufacturing agreement. Has facilities for stocking and distribution. Also has marketing strength in Italy, Europe, Middle East and Africa. Personal meetings can be arranged in either U.S. or Europe. Reply to CIME, Via Petrella 21, Milan 20124, Telex: 39650. P-76690.

3600—UNITED KINGDOM—Firm seeks licensing arrangement for production of **medical electronic equipment, high speed recorders for use in medical or scientific laboratories and for industrial applications, and photo-electric food sorting machines.** Presently operates as manufacturer and distributor of similar equipment. A. J. Smale, Mng. Dir., Devices Ltd., 26-28 Hyde Way, Welwyn Garden City AL7 3AP, Herts. WTDR. P-76691.

3622—GERMANY—License or assembly arrangement sought for **measuring and controlling accessories.** Currently manufactures ribbons, tapes, ink rollers, felt pads, recording pens, recording electrodes, sapphires and recording ink for recording instruments and would like to expand its production line. Customers include firms producing measuring instruments, chemical factories, steel works and rolling mills. Established 1956, has 170 employees. Dia Nielsen GmbH, Industriestrasse 1, 5160 Dueren. Attention: Herr Buschke. P-76709.

3645, 3646—CANADA — Seeks licensing arrangement for assembly of parts for **commercial and residential lighting fixtures.** Plant is housed in modern building and consists of 12,000 ft. of factory space. Plant facilities are located close to downtown area and international harbor area. Owns sheet metal equipment (punch press, shears, 8 ft. break press, etc.), aluminum and steel welding equipment, as well as high quality paint plant with phosphate cleaning and gas baking oven. Specializes in manufacture of non-standard architecturally designed chandeliers and commercial type lighting. E. J. Kingsley, President, Western Lighting Fixture Co., Ltd., 876 Cordova E., Vancouver, B.C. V6A 1M4. P-76698.

3674—SWITZERLAND — Seeks licensing agreements for manufacture of **semiconductors and related devices.** Licensed production would be by third parties. Edgar A. Ruckli, Granax AG, Electronics Div., Gartenstr. 14, CH-8002 Zurich. P-76660.

3679 — KOREA — Diversified manufacturer of **electronic component and steel fasteners** is seeking joint venture arrangement with U.S. firm for further expansion and for development of sales distribution in U.S. market. Rexford Kim, Chicago Branch Office, Hong Joo Industrial Co., Ltd., 7206 North Claremont Ave., Chicago, Ill. 60645. P-76711.

3679—UNITED KINGDOM—Firm seeks licensing agreement for manufacture of any form of **electronic assemblies or instruments.** Presently operates as manufacturer of wide range of electronic equipment including test equipment, and supplies both commercial and defense markets in U.K. Other items manufactured include printed circuit assemblies for logic and digital machine control, sonar equipment, H.V. power packs, electronic weigher units, reactor instruments, control gear, gamma alarm monitors, A.C. and D.C. amplifiers and communication equipment. O. L. Wright, Mng. Dir., Redcliffe Electronics Ltd., 24 Emery Rd., Brislington, Bristol BS4 5PQ. P-76692.

3728—FRANCE — Seeks to manufacture under subcontract **aircraft parts, accessories or components.** Established 1956 and is large manufacturer and exporter of private planes. Also acting as subcontractor for Societe Nationale Industrielle Aerospatiale and Avions Dassault. Annual sales volume $16 million. Jean Pichon, Deputy General Manager, Reims Aviation, B.P. 2745, 51062 Reims Cedex. P-76693.

3825—SWITZERLAND—Manufacturer of wirewound potentiometers seeks to diversify activity. Firm seeks licensing arrangements from U.S. producers of **resistors and non-wirebound potentiometers.** J. Jacques Tappy, Mng. Dir., ANTAX SA, P.O. Box 27, 1024 Ecublens. P-76699.

3832—UNITED KINGDOM—Firm acting as agent for optical products, spectacle frame cases and contact lens, seeks licensing arrangement for manufacture of **contact lenses.** Sells in U.K., EFTA, Common Market areas, Australia, Near and Far East. A. F. Clarke, Marketing Consultant, Int'l. Press Centre, Rm. 411, 76 Shoe Lane, London EC4. P-76694.

3841 — UNITED KINGDOM — Seeks licensing arrangement for manufacture of **non-disposable surgical products.** Items of particular interest are operating tables, instrument tray tables, sphygmomamometers, etc. Established 1919. Operates as manufacturer, distributor, exporter and importer of acoustic products, page winders and show domes. Current annual sales volume $4 million. R. R. Singh, The Power Equipment Co., Ltd., Kingsbury Works, Kingsbury Rd., London NW9 8UU. P-76695.

7011—AUSTRALIA—U.S. investor sought for **50-room island resort hotel** in heart of Australia's Great Barrier Reef. Investment would be approximately $200,000 to complement already committed local capital investment of $400,000. Lionel N. Berck. Chairman and Mng. Dir., Moonbee Village Hotel Pty., Ltd., P.O. Box 503, Mackay, Queensland 4740. Cable: Moonbee Australia. P-76710.

Salvador To Register Firms

Salvador plans to create a Fund for Pre-Investment Feasibility Studies—Fondo Salvadoreno Para Estudios De Pre-Inversion. A register of national and foreign firms and individuals offering consulting services in all areas is being established as part of the Fund. To register, consulting firms should request a form, supplied free, from: Lic. Roberto Chico Duarte, Sub-Secretario, Div. De Proyectos, Ministerio De Planificacion & Coordinacion Del Desarrollo Economico y Social, Casa Presidencial, San Salvador.

Mexico Projects Electric Needs

Mexico's National Chamber of Electrical Manufactures recently completed a study of projected needs of the country's government-owned electric power industry from 1977 to 1984. Equipment projected to be needed is listed by year and unit. A copy, in Spanish, is available for inspection at Room 4031, Mexico/Central America-OIM, U.S. Department of Commerce, Washington, D.C. 20230.

Licensing In U.S.

For additional information on these opportunities to manufacture foreign firms' products in the United States under a licensing agreement or in partnership, write the Domestic Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-377-2248), referring to the appropriate file number.

SWITZERLAND — Seeks U.S. firm to manufacture under license line of **commercial tilting pans, kettle and frying pans.** Offered is a closed hermetically-sealed circulation system which is partially filled with water and equipped with electric heating elements to transform water into steam for cooking or frying process. No refill of water is necessary and the system is maintenance free and does not tend toward calcification. Swiss firm claims that system is economical to operate and no burning of food is possible. Firm is large, prosperous and has active exchange of know-how arrangement with major U.S. stove manufacturer. File 3127

SWITZERLAND—Country's largest automatic press manufacturer offers its complete line of **hydraulic fine line blanking presses.** Considered to be among most advanced available for working thick materials. Large number of technical advantages are offered. Maximum available load is 630 metric tons, special off-center applications are possible, pressure can be supplied with automatic feeding attachments, strip removal attachments and devices to remove parts and slugs. Drawings, including all details of presses in question, have been adapted to U.S. specifications and safety regulations and are available for potential licensee. Swiss firm claims they now have over 8,000 automatic fine blanking presses in operation worldwide. File 3128

SWITZERLAND — Medium and heavy duty **spraying gun,** suitable for treatment of agricultural areas of all kinds, is offered to U.S. firms. Consists of powerful air blower, exhaust tube and spraying nozzle installed in tube. Nozzle produces fine mist of treating chemicals, thereby obtaining optimum effectiveness of preparations used. Mist is carried away by airstream of air blower at heights of over 60 meters (approximately 200 feet). Air tube can be aimed at anything horizontally or vertically by operator. File 3129

SWITZERLAND — New system of capturing wireless data. This is a multi-mobile one-line, real-time, wireless data collection and retrieval system consisting of data transmitters, numerical keyboards with display, alphameric keyboards with display, central field station, terminals, bar code read pens, digital magnetic cassette recorders and charging unit. Requests that prospective U.S. licensees should have adequate electronic production facilities as well as sales and service capabilities. File 3130

SWITZERLAND — Firm seeks American manufacturers interested in producing under license a novel and highly compact **unit consisting of shower cabinet on one side and on the other a compartment holding toilet, wash basin and swing-door cabinet.** Space-saving unit, which is completely revolving, is especially suitable for use on yachts and other boats, but can also be assembled and installed in four hours anywhere a bathroom is desired and space confined. File 3131

SWITZERLAND — Novel system of saddling heavy cable for laying heavy power cables with diameters exceeding 100 mm in shafts, pipes and other places difficult to obtain access. Producers of cable-laying equipment or firms specializing in cable laying are type of firms the Swiss firm most interested in working with. File 3132

SWITZERLAND — Paint and lacquer manufacturer offers licensing opportunity to manufacture exterior and interior PVA and ACRYL base **wall coating.** Can be applied with towel, roller or sprayer. Coating is light and weather resistant yet insures respiration of surfaces coated. Product has been successfully marketed in Switzerland for over 15 years and enjoys reputation for good quality. File 3133

SWITZERLAND — New patented **stocking and warehousing system.** Unlike others, can be used for combined stocking of long goods (iron rods, bars, etc.), as well as palletized items, cassettes and containers. Basic three elements offered are stocking units, servicing units (mobile lifting system to load and unload racks) and control units featuring mostly solid state electronics. Reportedly, this firm has done considerable research and development in field of advanced warehousing and stocking and is considered to have developed substantial know-how. Has been successful in selling its systems in many European countries, where several licenses have been appointed. File 3134

SWITZERLAND — Established manufacturer of machine tools offers its **gauge-grinding machine,** developed for production of templates, gauges (including snap gauges), and similar items, and also for use in tool rooms. Operation and accuracy (dimensions of work piece, grinding depth, etc.) are controlled by internal micrometer adjusted abutments. Can be installed at work benches and tables. Special accessories available. Especially suited for grinding of complicated gauge shapes. Licensee could, if preferred, purchase such items as drive motor, micrometer, etc., in U.S. Swiss firm specializes in machine tools for specialized purposes, automatic loading and feeding systems as well as tool and die production. File 3135

SWITZERLAND—Leading manufacturer offers licensee arrangements on following **meters:** cold water meters including mechanical counter; Woltman water meters for bores of 50-600 millimeters; hot water meters; oil meters; meters for chemical solutions and process liquids; heatmeters. Also, line of pneumatic, electric and electronic **signal transmitters** for use with general meter line. File 3136

UNITED KINGDOM — Company manufacturing pharmaceuticals seeks U.S. licensee for new **shampoo product.** Said to be effective, safe alternate to seleium sulphide in treatment of Sebhorrhoea Capitis Oleosa and Sebhorrhoeic Dermatitis of scalp, with none of side effects often encountered in this treatment. Marketed in United Kingdom under name Synogist. File 3137

UNITED KINGDOM — Small shipyard, established in 1800s, specializing in building workboats about 30 feet long, small tugs about 50 feet long, fishing vessels, yachts, landing craft, working in wood, reinforced steel and plastic, seeks licensing arrangement and/or joint venture with U.S. shipbuilding companies to build **vessels** to their design and specification in Cornish shipyards for marketing in U.K. and Europe. File 3138

UNITED KINGDOM—Firm specializing in design and manufacture of reproduction exterior **doors,** seeks possible license or joint venture arrangement with American firm. File 3139

UNITED KINGDOM — Small company operating as manufacturer of test rigs, dynamometers, tire test equipment, torque and force transducers, axle test rigs and gear box test rigs seeks U.S. manufacturer to produce and market in United States high accuracy chassis **dynamometer** for exhaust emission and road simulation testing of passenger cars. Claimed to be well proven and fully developed, and highly respected by present users. File 3140

UNITED KINGDOM — Firm manufacturing **ratchet screwdrivers** is interested in licensing arrangement with U.S. firm for manufacture of same. Claims this large, heavy screwdriver is capable of driving screws at greater than normal speed, falling between conventional ratchet screwdriver and more complex spiral ratchet. Speed is achieved by using both hands of double handle and screwing alternately by continuous rotation of blade. Drive is obtained by rollers located between flats on shaft of blade and cylindrical steel bore in handle. When torque is applied a small clearance allows rollers to wedge firmly between flat and bore of handles to provide drive and give solid feel. Four-roller version has withstood ten times British standard heavy-duty torque test. File 3141

UNITED KINGDOM—British firm offers their **hacksaw blades, pipe wrenches, precision machine vices, wood tools, carbon steel tools, pinchers and pliers and tight vices.** Form of arrangement open to discussion. File 3142

New Morocco, Tunisia Policies Will Give Bidders More Time

In separate and unrelated actions, the governments of Morocco and Tunisia have issued administrative circulars to government ministries and agencies which require more reasonable time-frames for receipt of bids on international tenders. American firms have long complained that Moroccan and Tunisian bid deadlines were too short to enable American bidders to receive, translate and analyze specification documents, make a proposal, translate it into French and deliver it to the appropriate North African agency within the specified time. The new regulations should stretch out the period of time acceptable to Moroccan and Tunisian government agencies for the receipt of foreign bids. Thus, American companies will find it more feasible to consider tender documents issued by these two governments.

The Tunisian action results at least partially from discussions at the U.S.-Tunisia Joint Commission meetings in October 1975. In Morocco, American Embassy officials brought the problem to the attention of Moroccan officials on behalf of the U.S. business community.

Additional information is available from the Commerce Action Group for the Near East, U.S. Department of Commerce, Washington, D.C. 20230.

The following trade opportunities are based on reports received from the U.S. Foreign Service—Department of State by the Trade Opportunities Division, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce America *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (●) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Building construction

● **15200 — NIGERIA** — Federal Livestock Department is seeking bids from firms for supply of wide range of agricultural and housing inputs required to establish several cattle ranches and grazing reserves in northern Nigeria. Interested firms should immediately send bids, including brochures, price lists (c.i.f. preferred), supply situation, etc. to: Project Manager, Livestock Project Unit, Federal Livestock Dept., P.M.B. 2012, Kaduna, Cable: FEDAG Kaduna; Telex: 71153 AGDEV NG. Following items will be required during first yr.: 35 stockholding units or corrals (either prefabricated or heavy wire types); 350 miles of stock fencing similar to Cyclone 5/70/70 and or 7/90/60 with five to seven lines (bids should be made per mile or per km); 10 cattle scales & squeezes; 2500 tons of triple superphosphate fertilizer (price per ton); 30 prefabricated, 3-bedroom managers' houses; 110 prefabricated laborers houses; 30 prefabricated, combination office/storerooms; unspecified quantities of plastic water piping, water troughs, windmills, metal storage tanks, water pumps, electric generators, vaccines, pesticides and herbicides. Firms should be sure to include estimates for sending of instruction teams where needed. These ranches and grazing reserves will be established under World Bank financing and management. Entire project will extend over three to five yrs., with similar supply needs expected each yr.

Men's, youths', boys' suits, coats

2311XXX, 23271XX—EGYPT—2,000 used mens' suits; 3,000 used men's trousers; 3,000 used men's overcoats; all in a variety of colors & sizes. Price quotations requested c.i.f. Alexandria. Above quantities are for trial consignment, to be followed by much larger quantities if transaction proves successful. Reply to—Farid Ragheb Kelada, Mgr., Farid Ragheb Kelada Co., 20 Mustapha Pacha Str., Sidi Gaber, Alexandria. Tel: 45219.

Wood products

● **24210, 24910 — MOROCCO** — Government requests bids for 948 railroad crossties and 25,558 pieces of oak lumber. Call for bids, specifications, price list, sample envelope, and bidding formula may be obtained by writing to Office National Des Chemins De Fer (ONCFM), Monsieur Le Chef Du Service Approvisionnements, Rue Halab, Rabat. Project financed by Moroccan National Investment Budget. Bids should be sent to above address with envelope marked "Offre De Prix No. 65135". Correspondence and bid submission should be in French. Deadline date Oct. 7.

Drugs

28330—BRAZIL—Joao Lunardi of Farbom Produtos Quimicos, Ltda., Rua Jose Bento 192, Sao Paulo 01523 (Cable: Farbom) wishes offers on four one-ton shipments of polyvinylprolidone (for blood plasma) and up to five one-kilo air shipments lobeline sulfate, annually. Contact Lunardi directly.

Chemical products

28920, 34830, 34840—PERU—Government entity manufacturing ammunition for Peruvian army wishes to contact U.S. manufacturers or suppliers of trinitrotoluene (TNT) explosive type, fuses for hand grenades, gunpowder, and pistols and revolvers. Write to Crl. M. G. Edgar Farfan Mayorga, Fabrica de Municiones Del Ejercito, Apartado 2129, Lima 100.

Iron & steel products

● **33100—BANGLADESH**—1,100 mt hot rolled steel strips for manufacture of mild steel pipes; 1,320 mt hot rolled steel strips for manufacture of galvanized iron pipes. Tender No. 2312/314; bid deadline Oct. 6. Titas Gas Transmission and Distribution Co., Ltd., Dilkusha Court, 7 Motijheel Commercial Area, Dacca 2. Tender documents available from Embassy of Bangladesh, 2123 California St., NW., Washington, D.C. 20008, at TK 1,000 (about $67.85) per set, not refundable.

● **33100 — IRAQ** — 5,000 seamless, cold drawn, low carbon steel, heat exchange tubes. Size of O.D. 1 inch, 12EWG, minimum wall thickness 20 feet long. Tender No. 10/76; bid deadline Sept. 28. Oil Refineries Administration (ORA), Baghdad. Cable: MASAFI, Baghdad. Specifications available from above address.

● **33100—KOREA**—Supply of steel sheet pile, 40 mm x 125 mm x 11.5 mm x 9 m. Tender No. KFX-760204-PI; bid deadline Sept. 28, Office of Supply, Government of Republic of Korea, Seoul. Specifications available from Iron & Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-2438.

● **33100—ALGERIA**—Supply of 400 cable shoes, 2,000 galvanized wire clips, and 600 steel ties. Tender No. 76-01; bid deadline ASAP. SN Metal, P.O. 90, Bejaia. Tender documents available at above address. Correspondence in French.

Important Notice

Most member countries of the League of Arab States employ a secondary boycott against foreign firms which undertake certain specific types of business relationships with the State of Israel. The Commerce Department will not disseminate or make available for inspection any tenders or trade opportunity documents which contain conditions intended to support such boycotts, or which are based on documents known to contain such provisions. Trade or investment opportunities published herein are not presently known to be subject to such conditions. However, it is possible that U.S. firms responding to opportunities from Arab countries may be asked at some stage of a transaction to participate in an Arab boycott-related restrictive trade practice as defined in the Department's Export Administration Regulations (15 CFR, Part 369 et. seq.).

Firms are reminded that pursuant to Section 3(5) of the Export Administration Act of 1969, as amended, it is the policy of the United States (a) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (b) to encourage and request U.S. concerns engaged in the export of articles, materials, supplies, or information to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting such restrictive trade practices or boycotts. Accordingly, U.S. concerns receiving such requests to participate in a restrictive trade practice or boycott are encouraged and requested to refuse to comply with them.

Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such request to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

• **33100—SINGAPORE** — Supply of steel pipes for transmission and distribution mains for water department. Tender No. WE652321/75; bid deadline Oct. 10. Water Utilities Board, Water Department, Singapore 6. Tender documents available from Finance Department, Public Utilities Board, 1st Floor, City Hall, Singapore 6, with deposit of S$500 (about $205). Project financed by loan from Asian Development Bank.

Iron & steel forgings

• **34600—THAILAND** — 2,000 wheels for locomotives and rolling stock. Tender No. B19232; bid deadline Oct. 10. State Railway of Thailand, Kasatsuk Bridge, Bangkok. Tender documents available from above address at $2.50 per set.

Fabricated wire products

• **34840—INDIA**—Supply of 6,000, 38-caliber revolvers with 4- or 5-inch barrel length to government. Closing date of tender Nov. 23. Tenders should be submitted to Supply Wing of Embassy of India, 2536 Mass. Ave., NW., Washington, D.C. 20008. Tender documents available at Embassy of India, 2523 Mass. Ave., NW., Washington, D.C. 20008, at nonrefundable cost of $10.

Metalworking machinery

• **35400, 35500, 35700, 36600, 38100, 38200, 38600 — INDONESIA** — Government invites firms to bid for supply of workshop and training center equipment for East Java Agriculture Credit Project under Asian Development Bank Loan No. 197 8,9(SF). Tender documents, at Rupiah 20,000 (approx. $48.19) per set available from Project Development Office, Directorate General of Cooperatives, Jalan Let.Jend.Haryono M.T., Tromol Pos 384, Jakarta Selatan, and must be obtained prior to submitting offers. Bid deadline Nov. 5. List of equipment required available from Dept. of Commerce, TOP, Rm. 2321, Wash., D.C. 20230; 202-377-2251.

General industrial machinery

3567391—BOLIVIA — 500 AKC bars for electric furnace; 100 bar suspension hooks. Bars should be of 17255/AKC material; specific resistance of 1.27 ohms/mm2/m at 1,000 centigrades. Chemical composition—percent c-max. 0.25; perment mn-max. 1.50; percent si-max 2.00; percent cr-23-27; percent ni-18-22; percent fe-remainder portion. ENAF needs above ASAP as it runs risk of stopping operations at Oruro-Vinto smelter refinery, if it runs out of these items. Reply ASAP to—Empresa Nacional de Fundiciones, Ing. Jorge Lema Patino, Casilla 4301, La Paz. Cable ENAF; telex Enabol 3560090 via ITT.

Service industry machinery

• **35890—GHANA** — Tender for supply, installation and startup of mechanical and electrical equipment for major urban water supply facility. Principal items include water treatment plants, complete with pipes, fittings, and accessories, electric driven centrifugal pumps and laboratory equipment. Ancillary supplies include point-to-point radio communications system, transportation equipment, and mobile engineering workshops. Bid deadline Nov. 15. Specifications and tender documents available for non-refundable fee of 500 DM (approx. $197 U.S.) from Consulting Engineer IGIP, D61 Damstadt, Martin Buberstrasse, 50, West Germany. Tender docs. must be obtained prior to submission of bid. Procurement forms part of 9 million cedis (U.S. $7.8 million) project being financed with West German loan. Ref.: Part III Cape Coast and Sekondi-Takoradi Water Supply Project.

• **35892—IRELAND**—Electricity Supply Board wishes to receive prices and literature for electro-chlorination plant to be installed at Aghada Generating Station, Cork Harbor. Initial output to be 270 MW. Estuarine cooling water to be used, being 90 percent sea and 10 percent fresh water. Cooling water at rate of 27,000 M3/HR. Chlorine demand on 10 minutes contact basis to be 1.7 to 2.3 MG/Liter. No fixed deadline. Budget offer is for planning and design purposes only. Full specification to be issued next year. Sketch or drawing showing overall dimensions required to house plant should be included with budgetary and price data. Reply to: B. A. P. Langley, Project Department, Electricity Supply Board, Stephen Ct., 18/21 St. Stephen's Green, Dublin 2. Ref.: B/D111/30/P/BAPL.

Electric transmission, distribution equipment

• **36100, 36400, 38200 — INDIA** — Orissa State Electricity Board requires following items for its Rural Electrification Program, financed by IDA: Aluminum conductors—20 MM2 ACSR WEASEL, 6300 km; 16 MM2 AAC GNAT, 1700 km; 30 MM2 AAC ANT, 1100 km. 3-phase distribution transformers, 11 KV/433/250 volts, 100 KVA, 35 nos.; 63 KVA, 173 nos.; 25 KVA, 575 nos. Insulators with hardware fittings, 11 KV disc (T&C) type 15,000 nos. Energy meters, single phase 2.5 A, 25,800 nos.; single phase 10 A, 16,500 nos.; 3 phase for wire 10 A, 200 nos. Bid deadline Dec. 7. Bid No. IDA/REC/OSEB-1/76. Bidders must procure tender forms from Superintending Engineer, Stores & Purchase, Orissa State Electricity Board, Bhubaneswar 751007, Orissa, for Rs.100 ($11.30), prior to submitting offers.

Important Notice

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Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such receipt to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

Electric lighting, wiring equipment

3643057 — JAPAN — Appliance type pin connectors (16 pins, 24 pins, etc.). Est. annual purchase $5,000. Small importer/distr. of medical apparatus, interested in importing replacement parts for electronic medical & bio-medical equip. Capital $10,000. Annual sales $500,000. Ref.: Itachibori Br. of Sumitomo Bank, Osaka. Reply to—Kiyoshi Tanaka, Pres., Bio Medica Ltd., Tanaka Bldg., No. 14, 3-Chome, Kyomachibori, Nishi-Ku, Osaka 550. Cable Bio Medica Osaka; tel: 06-443-9666.

Communications equipment

• **36610—INDIA**—Director General, Posts & Telegraphs, MMD Section, Parliament St., New Delhi, has issued tender No. 8-20/76-MMD for supply of 8 keyboard perforators and 8 automatic transmitters for use with 230V 50 cycle current. Bid deadline Nov. 11. Copy of specifications available from Assistant Director General (Imports), Room 514, P&T Directorate, New Delhi, for 20 rupees (U.S. $2.74).

Consultancy & services

9921XXX — SWITZERLAND — Reputable marketing consultant will assist U.S. companies in franchising projects, licensing arrangements, mergers, joint ventures, legal & corporate matters in Switzerland & Europe. Prefina is marketing consultancy of Beat Muller, reputable, active Bern business lawyer. Employs 5. Bank: Swiss Volksbank, or Swiss Bank Corp., 3001 Bern. Reply to—Beat Muller, Pres., Prefina Consultants & Brokers, International Marketing, Schwarztorstrasse 28, Postfach Mattenhof, 3000 Bern. Cable Prefina Bern; tel 031/255125.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Knitting mills, products

2253311, 2253313—GERMANY—Women's, misses' dresses & suits, knit. Est. annual sales potential $300,000. Products offered to be of top quality & style. Acts as agent for several French mfrs. of high-fashion ladies' outerwear. Has 3 sub-agents

& sells to about 1,000 medium & high-class ladies' outerwear stores in Germany. Good financial reputation. Reply to — Heinz Nuttelmann, Slevogistr. 18, 2800 Bremen 1. Tel. 0421-341242. Excl. agy.

Synthetic materials

28213XX, 28214XX — SWITZERLAND— Polyethylene & polycarbonate in granules. Chemical technical group of Bally Intl. shoe concern. Good reputation. Sales territory of plastics dept.—Switzerland. Business strongly recommended. Reply to—O. Scherer, Mgr., Bally Ctu, Plastic Dept., 5012 Schoenenwerd. Cable CTU Schoenenwerd; tel 064/40 14 22; telex 68927.

Special industrial machinery

3559589—THAILAND—Staple making machine, fully-automatic, adjustable, producing staples of sizes 24/6; 26/6, B8 & No. 10. Production capacity of 10,000 staples/min. Initial requirement: one complete set. Requests c.i.f. Bangkok prices, catalog & general specs. Buyer is a mfr. of staples. Seeking above equip. for expansion project. Reply to—Michael Hon, Mgr., Thai Wah & Co., Ltd. Part., 236/2 Sathupradit Rd., Bangkok 12. Cable Sinoimpex; Tel. 284-1780.

General industrial machinery

35645XX, 35852XX, 3634396—SWEDEN— Air humidifiers; household & industrial; air purification equipment; household & industrial. Also, heat pumps, single package; heat pumps, split systems with precharged lines; split systems, airconditioning, condensing units. Must be designed to operate on 220v, 50 HZ. Inquirer is small but well-established distributor for some large Swedish importers and agents in air treatment field. Would like to expand its program and is therefore seeking direct contact with U.S. suppliers. According to local credit sources firm meets obligations satisfactorily and is recommended as trade contact. Reply to—Allan Forsberg, ABG Komfort Service AB, Tomtebogatan 35, S-113 38 Stockholm. Tel. 08/34 50 40.

Office, computing, accounting machines

3576041—DENMARK — Bathroom scales. Medium-sized firm estab. 1948. Importer & wholesaler of all types of bathroom accessories. Sales territory: Denmark. Five traveling salesmen. Excl. rep. Reply to E. Demant Sparbo, Mgr., Emil A. Petersens EFTF., 12 Haslegaardsvej, DK-8210 Aarhus V. Tel 06-154488.

Household appliances

3634213 — NEW ZEALAND — Wind up face shaver (requires no electric power or batteries). Wishes to estab. agency arrangement. Write—A. B. Donaldson, Lancaster Enginering Ltd., P.O. Box 10067, 17 Lismore St., Christchurch. Tel. 30745.

3634411—ISRAEL—Parts & accessories for electric housewares & fans to be used in assembling "iceless" coolers for vans, trucks & buses. Est. potential sales of complete product: 1,000 units for 1st yr. Quote f.o.b., Ex-Factory. Estab. 1973. Agent, wholesaler & retailer of locally mfrd. children's furniture & PVC walls, doors, ceilings & floors. Employs 8. Annual sales reportedly IL. 1.5 million (IL. 8.20 equals $1.00). Reply to—Menahem Granit, Mgr., Imfalite Ltd., 20 Nordau St., Tel Aviv. Tel. 04/666198.

Instruments for measurement, analysis and control

38250XX—ITALY — Oscilloscopes, sweep generators. Quotations c.i.f., delivery ASAP. Small agent-distr. of peripheral equip. for computers & electronic components. Has 7 employees, 4 traveling salesmen, 3 reps. Sales operation covers all Italy. Enjoys good reputation. Cable Marco Turolla, Radiel S.p.a., Via Villa Mirabello 6, 20125 Milan. Telex 37497 Escomil; phone 688.75.48.

Air transportation

4511XXX—COLOMBIA—Air transportation, certified carriers. Firm wishes to act as sales representative for passenger and/or cargo airlines not regularly operating to or from Colombia but connecting with lines operating from Colombia and/or offering special chartered flights. Reply to—Enrique Micolta, Mgr., Rodolfo Salcedo Inversiones, Ltda., Apartado Aereo (P.O. Box) 5953, Cali, Valle. Cable: Rosalcedo, tel: 871893.

Consumer goods

9921105—SWITZERLAND — Direct selling specialist with in-depth experience in Swiss and European markets seeks to represent U.S. consumer goods. Will advise U.S. companies seeking to establish sales network in Europe. BA in Economics, University of Lausanne. Former Director General of Dart Industries, Switzerland. Bank ref: Swiss Bank Corp. 1260 Nyon, or Vaud Cantonal Bank, 1000 Lausanne. Trade ref: Dr. G. Schwaar, President, Dart Industries Switzerland, Rue Chs. Monnard 1, 1000 Lausanne. Reply to—Pierre-Roland Schwarz, 1171 Fechy. Tel. 021/76 56 91.

OECD Publishes New Study On Government Purchasing

The Organization for Economic Cooperation and Development (OECD) has just published "Government Purchasing—Regulations and Procedures of OECD Member Countries".

The OECD Trade Committee has for several years been studying the regulations, procedures and practices of member countries in the field of government purchasing of supplies. This publication is based on the Committee's work. Its aim is to provide information regarding administrative and technical regulations likely to hamper international trade with a view to contributing, in particular, to the search for making government purchases more open to international competition.

This 130-page publication may be obtained for $7 from OECD Publications Center, Suite 1207, 1750 Penn. Ave. NW., Washington, D.C. 20006.

Electronic Watch Symposium Will Be Held In Monte Carlo

An International Electronic Watch Symposium will be held in Monte Carlo Nov. 17-18. Three major subjects will be covered: the evolution of the electronic watch, and its impact on the traditional watch industry and on the world market; the principle of the electronic watch, including the choices of displays and components; and production.

Address inquiries to Symposium International de la Montre Electronique, C/O Jeune Chambre Economique de Monaco, 33 Rue de Portier, Monte Carlo.

Future Construction Abroad

UNITED ARAB EMIRATES—Sewerage Projects Committee of Government of Abu Dhabi has issued a call for tenders from experienced contractors for temporary erection and testing at contractor's works, conveyance to site and re-erection of **pumping equipment and associated plant, together with standby generation plant for three pumping stations.** Tender documents may be purchased from either Sewerage Projects Committee, P.O. Box 3487, Fayed Building, Hamdan St., Abu Dhabi, UAE (for 2000 dirhams—one dirham equals approximately $0.25); or John Taylor and Sons, Artillery House, Artillery Row, London SW 1 (for 300 pounds sterling). For purpose of identifying correct documents, this is Sewerage Committee Contract No. 108. Closing date for bidding is Nov. 1. For further information contact: Pete Zantal, CAGNE/BIC, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-377-4441. Also, please send copy of correspondence to Pete Zantal.

ALGERIA—State Railways Corporation has invited tenders for construction of a second **railway** in Eastern Algeria between Constantine and Ramdane Djamel and between El Guourzi and El Khroub. Project will include all construction, earth excavation, building of one low bridge, three tunnels, construction of ballast, building, railway stations and houses, installation of railway and signalling system. Tender documents available from: Monseiur l'Ingenieur, Chef du Service de la Voie et des Baltiments, Bureau Travaux-Marches, SNTF, 21-23 Blvd. Mohamed V, Algiers. Closing date for bids Oct. 26. All correspondence must be in French. For further information contact Pete Zantal, 202-377-4441. Also, please send copy of all correspondence to Pete Zantal.

MALAYSIA — Following two **highway projects** may be of interest to construction firms and suppliers: 1) During Third Malaysia Plan period (1976-1980), pilot road maintenance programs will be carried out in States of Kelantan, Johor, Perak and Sabah. M$45 million is provided under Third Malaysia Plan for this purpose. Kampsax International, a Danish firm, has been asked by the government to carry out studies on road maintenance program in Sabah and pilot road maintenance program in Peninsula Malaysia. Contact is D. Inderjit Singh, Dir. (Roads), Ministry of Works & Utilities, Jalan Tun Ismail, Kuala Lumpur. 2) Design for the 50 miles of Federal Route I to the north and south of Ipoh was conducted by Valentin, Laurie and Davis, Australian firm. Tenders for construction works scheduled to be issued in mid-1977. Segments which will be constructed, improved and upgraded are Ipoh/Chankat Jering Road (39 miles) and stretch between Ipoh and Bidor (40 miles). Contacts are Zaidan bin Haji Othman and D. Inderjit Singh, Ministry of Works and Utilities, address above. OPIC.

IVORY COAST — Several **railway proj-**

ects are under way, including major improvement in right of way of Regie Abidjan-Niger between Abidjan and Ouagadougou, and possible 350-km.-line between San Pedro and Man primarily intended to carry iron ore pellets mined and processed at Mt. Klahoyo facility now under construction. Ivory Coast imported about $5 million worth of railway equipment in 1975. Report from the American Embassy in Abidjan on current projects on Ivory Coast railway system is available from U.S. Dept. of Commerce, TOP, Rm 2321, Wash., D.C. 20230, 202-377-2251. OPIC.

EGYPT—Port of Alexandria has ambitious **port development program** and appears to offer ample opportunities for U.S. firms. Wide variety of products ranging from communications to materials handling equipment is required. Port officials indicate that a major dredging contract will be offered in immediate future to deepen and widen the harbor entrance. Alexandria Port Authority has announced successful arrangements for loans for port developments as follows: Part of a $45 million IBRD loan to be used for port entrance dredging contracts and dredging along existing quays to a depth of 15 meters for berthing 60,000 ton bulk carriers. $30 million AID Loan for purchase of mobile cranes, trailers, trucks, fork lifts and tug boats to be supplied within period of 2 yrs. $20 million Japanese loan to purchase 6 tugboats (2000 HP), 3 pilot boats, 8 general service boats, and 2 mobile cranes and grabs. Present capacity of port is 10 million tons expected to reach 16 million tons by 1980. $55 million (local currency) will pay for customs duties and purchase of material and equipment on local market. Following are some of the new mechanical and electrical projects for the Port: Install harbour control radar to insure safety and increase facilities for ships entering and leaving the port day and night. Project, under preparation, includes: Installation of a new visual day and night mast at El-Kamaria Signal Station near port entrance. Installation of harbour central radar of modern design using large size PPI screen. Installation of a VHF R/T set for communication with Alexandria Harbour Radio VHF Station for communications with incoming and outgoing ships. Necessary to increase depth of Great Pass from 10.6 m. to about 15 m. and width from 180 m. to 300 m. in order that largest ships can enter easily in all weather conditions. Port of Alexandria urgently requires experimental laboratory for coastal erosion including tanks and equipment to carry out experiments on small scale models of breakwaters, groynes, etc. Also required for experimenting with ship models. Pontoons will be required for salvage of ships sunken in harbour entrance and passes. Mooring ship required to replace obsolescent light and mooring buoys in harbour and channels. Machine tools needed to replace obsolete equipment. Alexandria Port Authority, 106 Ave. El-Horreya, Alexandria. OPIC.

UNITED ARAB EMIRATES — Ministry of Electricity and Water has invited bids for following works: Tender No. E11/76—33 Kv **primary distribution system** development for east and west coast areas of northern Emirates, including supply and installation of 33 Kv transmission lines, transformers, switchgears, high voltage and low voltage distribution system, etc., and all civil works. Only firms with experience in engineering similar projects should apply. Applications for tender documents can be made to Ministry of Electricity and Water, P.O. Box 1672, Dubai, UAE, or Embassy of UAE, London. If documents are obtained from Ministry, payment of DH. 2500 (1US$ equals 3.92 DH.) should be made. If file is obtained from UAE Embassy, payment of 300 pounds sterling should accompany request. Tender documents will be available until Oct. 5. Closing date for submittal of tenders Oct. 24. For further information contact: Pete Zantal, CAGNE/BIC, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-377-4441. Also, please send copy of correspondence to Pete Zantal.

EL SALVADOR—Water Supply Agency, ANDA, is contracting, under its North Zone Project for furnishing of water to metropolitan San Salvador, for design, supply of materials and construction of 10 **reinforced concrete storage tanks.** Contract will be on turnkey basis, and materials will have to conform to A.W.W.A. standards. Work to begin Jan. 17, 1977, and terminate March 1978. Bid provides good opportunity for U.S. firm to engage in joint venture with local contractor. Project partially financed with IBRD Loan Contract No. 426/SF-ES. Instructions to bidders in Spanish available from Dept. of Commerce, TOP, Rm. 2321, Wash., D.C. 20230; 202-377-2251. Conditions of contract, technical tender specs., list of quantities and plans available to interested bidders for 150 colones, equal to $60, from Ofician Del Proyecto Zona Norte (ANDA), Boulevard Del Hipodromo No. 609, Colonia San Benito, San Salvador. However, ANDA does not mail these to the U.S. or other countries. Refer to Licitacion No. IM I/76. Bid deadline Oct. 18.

INDIA—Gujarat State Fertilizer Co. Ltd. (GSFC), Fertilizer Nagar, District Baroda 391 750, Gujarat, manufacturer of fertilizers, caprolactum, oleum, ammonia, pesticides and other chemicals, is planning to expand its present manufacturing capabilities and to diversify into other chemical and petrochemical fields, as follows: **Caprolactum Plant Expansion:** Expansion of existing caprolactum plant from 20,000 to 40,000 metric tons a year is under consideration. Estimated cost $72 million. No information available on choice of contractors, if any. **Nylon Chip Plant:** This scheme for producing 4,000 metric tons of nylon chips and molding powder has been cleared by the Indian Gov't. Project to cost estimated $14.4 million, expected to be completed within 30 months from date construction starts. GSFC, however, has not made final arrangements for foreign exchange financing. **Melamine Plant:** Project envisages production of 5,000 metric tons of melamine powder a yr., and will cost approx. $12 million. **SAN & ABS Projects:** Based on technology developed by its Research & Development Div., GSFC plans to establish plants to manufacture 500 metric tons of styrene acrylontrile (SAN) and 4,000 metric tons of acrylontrile butadine-styrene (ABS) a yr. However, before undertaking commercial production, GSFC will monitor operational feasibility of its pilot plant. **Fertilizer Plant:** Second fertilizer plant GSFC is sponsoring, to be located in Gujarat State, and proposed to have capacity of 1,350 metric tons of ammonia and 1,600 metric tons urea a day. Feedstock to be used will probably be fuel oil. Estimated outlay $260 million. **Purge Gas Recovery Project:** GSFC is planning to establish a gas recovery plant at its existing complex at estimated cost of $14.4 million. It has entered into technology and supply agreement with unidentified West German firm, and World Bank financing is likely to become available for purchase of imported equipment. **Production Streamlining Program:** To improve productivity and remove production bottlenecks, GSFC has drawn plan to add balancing equipment to its existing phosphoric acid plant (est. outlay $1.2 million), fluorine recovery project ($1.2 million), caprolactum plant ($3.6-$5 million). Interested U.S. suppliers of chemical equipment and engineering services should contact M. D. Rajpal, Managing Dir., GSFC, address above, Cable: FERTILIZER; Telex: GSFC-BRD-017-211. OPIC.

The Overseas Private Investment Corp. (OPIC) offers political risk insurance to U.S. construction firms planning to submit bids on projects in certain developing countries, identified by the "OPIC" notation at the end of some items. For further information on OPIC's construction insurance program, write Information Officer, Overseas Private Investment Corp., Washington, D.C. 20527. Tel: 202-632-1854.

ALGERIA—Bidders are sought for construction of **turnkey plant to manufacture electric batteries** of various sizes. Plant capacity breakdown is 90,000,000 batteries for home use, 400,000 for specialized use and 240,000,000 zinc inserts. Offers must be 10 copies in French, include training of personnel and technical assistance, and should be sent no later than Dec. 25, via registered mail, to Directeur des Projects, SONELEC, 12 Blvd. Nacira Nounou, Belcourt. Interested firms should indicate to same address, before deadline, the intent to submit offer. All specs metric, correspondence in French required. Tender documents may be available from Department of Commerce. Firms should contact Andras F. Behr, BIC/CAGNE, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-4441.

LIBYA—Tenders are invited for supply, transport and installation of **500 housing units** throughout Libya. SIC 34482. Tender is indivisible and must be presented by local agent. Will be financed by government through Libyan commercial bank. Specifications available from School Buildings Administration, Bashir Assaadawi St., Tripoli, upon payment of DL 20 (US $70). Offers must be accompanied by initial guarantee of DL 15,000 (US $51,000) and should be submitted to Minister of Treasury, Central Tender Committee, Shara Shatt, Tripoli. Deadline is Aug. 30; attempts are being made to extend it. Interested firms are also advised to contact Andras F. Behr, 202-377-4441.

SAUDI ARABIA—Bottling plant expansion. The Seven-Up Bottling Plant of Saudi Arabia (P.O. Box 660, Jiddah) plans to increase its output from current 7,000 cases per day to at least 40,000 cases per day. Plant manager Fouad Rizak believes this will require an entire new plant. Owner Sheikh Kamal Adham desires to have U.S. firm design complete plant, including all internal work such as flow patterns, choice of equipment,

concentrating on automated labor-saving machinery as well as establishing guidelines for personnel management. Latter will include designation of skills and functions, including wage and salary scales. U.S. firm will also be required to organize sales and distribution methods and studies of raw materials requirements. Firm has 150 x 200 meter lot ready for construction and anticipates spending at least $10 million on project. Interested firms contact Fouad Rizak at above address, cable: SEVENUP JIDDAH. Firms are also requested to contact Andras F. Behr, 202-377-4441.

IRAN — International prequalification tender has been issued by Iran Japan Tourism Co. for construction of luxurious 700-room, 25-story, steel structure **hotel** in Tehran, designed by Kenzo Tange. Prequalification questionnaire may be obtained Sept. 15-22 from IJTC office, second floor, Construction Bank Bldg., 164 Elizabeth Blvd., telex: IMDBIR 212816. Completed questionnaire should be returned to IJTC office by Oct. 17. Additional information available from Andras F. Behr, BIC/CAGNE, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-4441. OPIC.

Important Notice

Most member countries of the League of Arab States employ a secondary boycott against foreign firms which undertake certain specific types of business relationships with the State of Israel. The Commerce Department will not disseminate or make available for inspection any tenders or trade opportunity documents which contain conditions intended to support such boycotts, or which are based on documents known to contain such provisions. Trade or investment opportunities published herein are not presently known to be subject to such conditions. However, it is possible that U.S. firms responding to opportunities from Arab countries may be asked at some stage of a transaction to participate in an Arab boycott-related restrictive trade practice as defined in the Department's Export Administration Regulations (15 CFR, Part 369 et. seq.).

Firms are reminded that pursuant to Section 3(5) of the Export Administration Act of 1969, as amended, it is the policy of the United States (a) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (b) to encourage and request U.S. concerns engaged in the export of articles, materials, supplies, or information to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting such restrictive trade practices or boycotts. Accordingly, U.S. concerns receiving such requests to participate in a restrictive trade practice or boycott are encouraged and requested to refuse to comply with them.

Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such receipt to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

SAUDI ARABIA—Ministry of Municipalities and Rural Affairs will soon invite selected number of design engineering firms to submit proposals for complete **solid waste disposal program** for municipality of Jiddah. Invitations will be issued based on prequalification documents on file at Ministry. Value of design contract could be as high as $15 million. Overall project expected to total $125-$200 million. Additional information and prequalification data available from Andras F. Behr, 202-377-4441.

ALGERIA—Foreign State Corporation tender has been issued for construction and full equipping of **nine complete cattle feed lots,** starting capacity of each 2,000 head per year. French tender documents and blueprints cost DA 100.00 (approx. US $24) and are obtainable from ONAB, 26 Blvd. Zirout Youcef, Algiers, cable: ONAB ALGER, telex: 52913. Offers should be sent no later than Nov. 30, by registered mail to same address. Offers should include technical literature in French, references describing similar past experience, info on technical assistance and training of personnel and should remain valid 90 days past deadline. Offer and correspondence in French required, all specs metric. Tender documents and additional information also available from Andras F. Behr, 202-377-4441.

ALGERIA—Silo construction, update of previous announcements. Construction on 41 different sites of unknown number of silos totalling 3,000,000 metric tons of capacity. Deadline for all phases of this project has been extended to Oct. 30. For additional information contact Andras F. Behr, CAGNE/BIC, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-4441.

TUNISIA—Government has issued international tender for supply of **water purification facilities** in Sousse North (lot 3B) and Djerba Zarzis (lot 5B) and portable water distribution system for Djerba Zarzis (lot 5A). All above are major tourist areas. Tender docs and specs may be purchased for DT 30 (US $70.50) for each of above projects from ONAS, 8 Rue de Senegal, Tunis, with payment by check drawn on Tunisian bank or by bank transfer in name of Monsieur le Directeur de l'Office National de Tourisme. Deadlines: Lot 5A— Oct. 20; Lots 3B and 5B— Dec. 15. For additional information and detailed instructions on bidding procedure, contact Andras F. Behr, BIC/CAGNE, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-4441. OPIC.

ALGERIA—Prequalifiers sought for design and construction of **3,000 houses** on different sites. No tender document issued. To obtain tender information, U.S. firms should write no later than Oct. 4 to Sous Direction des Finances et de l'Equipment, Bureau des Marches et des Subsistances, Directon Generale de la Surete Nationale, Chemin Gadouche Abdel Kader, Hydra, Algiers. Correspondence should include references describing past experience and background. Offer to remain valid 90 days past deadline. Offer and correspondence in French required, all specs metric. Interested firms also requested to contact Andras F. Behr, 202-377-4441.

EGYPT—Egyptian FAO official with Oman Ministry of Agriculture plans to set up small **fish packaging plant** in Egypt. Plant would process and package five tons of dried fish per day. Location planned either on Lake Nasser or Red Sea. Financing assured. American firms interested in supplying machinery write directly to Dr. Ahmed el-Morshidy, Ministry of Agriculture, Fisheries, Petroleum and Minerals, P.O. Box 1425, Sultanate of Oman. Firms also requested to contact Andras F. Behr, 202-377-4441. OPIC.

SYRIA — Prequalifications invited for **studies of water, regional and particular urban studies.** First studies to be executed will be city center of Homs (population 300,000). Applications must be submitted in envelope entitled "application for prequalification, city and regional planning" and accompanied by documents testifying to firms experience. Firms with experience in planning cities (especially Arab ones) between 100,000 and one million inhabitants preferred. One month after deadline Ministry shall invite six qualified firms to submit within two months detailed proposal for master plan and city center of Homs. Final consulting service contract shall be awarded within five months of initial Sept. 16 deadline. For further information, contact soonest Ministry of Housing and Utilities, Department of City and Regional Planning, Azmeh Sq., Damascus. Interested firms are also requested to contact Andras F. Behr, 202-377-4441.

MALAYSIA—Power VIII Project—Construction of **thermal power station** at Pasir Gudang with two 120 MW units. Estimated cost U.S. $30 million. Consultant work was awarded to TATA, Indian firm. Tenders for construction works will probably not be issued until late 1976. Contact A. Ramanath, Deputy General Manager, (Planning & Construction), National Electricity Board, P.O. Box 1003, Kuala Lumpur. OPIC.

Visiting Buyers & Officials

ISRAEL — Joseph Giveon, Dir., Giveon Agencies, Ltd., 105 Hahashmonaim St., Tel Aviv, seeks agency representation with manufacturers of **semiconductor devices** such as integrated circuits, transistors, diodes and rectifiers. Giveon plans to visit Los Angeles, Sept. 15-18; Chicago, Sept. 29-Oct. 1; New York, Oct. 4-6. He may be contacted through Betty Patrick, Foreign Buyer Program, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-3265.

AUSTRALIA — G. Dwyer, Manager, Dwyer's Interiors, 40 Belmore Rd., Randwick, New South Wales, 2031, is interested in purchasing **lamp bases** and both modern and reproduction **home furnishing accessories.** He may be contacted through Betty Patrick, 202-377-3265.

ECUADOR—Jose F. Medina, P.O. Box 3732, Guayaquil, poultry supply house operator, is interested in contacting suppliers of **poultry automatic feeders and waterers** (60 cycle 110/220 volt AC available). Purchase potential will depend upon attractiveness of price quotations. Medina may be contacted through Betty Patrick, 202-377-3265.

NIGERIA — M. A. Omesade, M. A. Omesade and Co., Unity House, 37 Marina, P.O. Box 4256, Lagos, is interested in hearing from suppliers of **auto spare parts, particularly for AMC vehicles.** He

also wants contacts with large U.S. **maintenance firms** as well as suppliers of **agricultural equipment, i.e., tractors, storage silos, refrigeration equipment, etc.** Omesade is also interested in **credit card organizations** such as Diners Club or Carte Blanche. He may be contacted directly or through Terry Rettig, 202-377-3265.

VENEZUELA—Messrs. A. A. Takkas and E. W. Filmer, representing Petroven, a Government of Venezuela holding company for its nationalized petroleum industry, want to hear from manufacturers or suppliers of **message switching computers and telephone exchange equipment** to be used to extend the teletype configuration for Petroven in Venezuela. Brochures and other information may be sent through Terry Rettig, 202-377-3265.

CHILE—Miguel Rogers-Martinez, official of the Chilean Ministry of Housing, wants to hear from U.S. manufacturers of **prefab housing and related machinery for assembling houses.** Brochures and related information may be forwarded through Terry Rettig, 202-377-3265.

BELGIUM—Roger Roosbeek, International Tyres Belgium, Roger Roosbeek and Co., Melkerijstraat 1, B-3434, Neerhespen, is interested in contacting suppliers of **batteries and motor oil** for passenger cars and trucks and **tires** for passenger cars. He may be contacted through Betty Patrick, 202-377-3265.

AUSTRALIA—Dr. B. J. Amos, Project Planning Officer, Westmead Hospital Project, N.S.W., Sydney, will visit the United States to purchase **nurse call systems, patient monitoring systems, and other systems for improving hospital efficiency.** Amos will arrive San Francisco Sept. 14, and attend American Hospital Association Convention in Dallas, Sept. 20-23. He will visit Cleveland after the show. Westmead, the largest hospital project in New South Wales, will cost over $200 million. Amos may be contacted through Bill Corfitzen, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-2068.

PAKISTAN — Gulzar Ahmad Khan, Director, and S. M. Zafar, Legal Advisor, G.M.G. Tanneries Ltd. and United Art Leather Ltd., 88-B-3 Gulberg III, Lahore, will be visiting the United States this month to purchase **leather tanning machinery and equipment** for two plants. They want tanning equipment, 500 hides per 8-hour shift, and artificial leather for coating of PVC pastes, direct or transfer coating system, working width 1,800 mm., normal width 2,000 mm., production speed variable between 2 to 30 meters per minute. They are willing to sign agreement for prompt supply. These firms tan leather and manufacture artificial leather, rexine, and PVC. Involvement in coating and laminating has been proposed. These buyers will visit New York, Detroit, Atlanta and Disney World. They speak English. They have budgeted $538,-700 for tanning machinery and $454,200 for artificial leather machinery. They have Government of Pakistan sanction for foreign exchange. Contact them directly or through Bill Corfitzen, 202-377-2068.

INDIA—G. Khandwala, Vice Chairman, and D. J. Madan, Mng. Dir., Gokak Mills, Div. of Gokbc Patel Volkart Ltd., Forbes Bldg., Charanjit Rai Marg Home St., Bombay 400001, will visit the United States Oct. 1-8 to meet with textile machinery manufacturers and to purchase **technology for manufacture of non-woven fabrics, industrial fabrics, transfer printing, and terry toweling.** Visitors would also like to see plants producing these items. Gokak is a leading textile mill planning diversifications of its product line. Visitors' itinerary precludes visiting ATME exhibit, Greenville, S.C., Oct. 21-29. Bill Corfitzen, 202-377-2068.

AUSTRALIA—M. C. Jones, Manager, Isis Trading Co., Guildford, N.S.W. 2161, will visit the United States in October to buy **home improvement handyman kits, outdoor metal or plastic furniture in knockdown packs, garden tools, and garden accessories.** He will arrive Miami on Oct. 21 for a ten-day visit that will include Chicago, St. Louis and lower West Coast. Contact Bill Corfitzen, 202-377-2068.

GERMANY — Borries J. Broszio, Mng. Dir., Broszio and Co., 2 Hamburg 19, seeks American suppliers of new **do-it-yourself products** of all types for sale and distribution in Germany. Broszio will visit the United States in January 1977. Bill Corfitzen, 202-377-2068.

AUSTRALIA—F. Harvey will visit the United States in October to locate U.S. suppliers of **bed sheets and pillowcases.** He will arrive Los Angeles Oct. 13 and San Francisco Oct. 18. He may be contacted through Bill Corfitzen, 202-377-2068.

AUSTRALIA—Peter Harris, Mng. Dir., ASHCO Pty., Ltd., 70 Parramatta Rd., Stanmore, New South Wales 2048, is interested in hearing from manufacturers of **accessories to fit traditional furniture.** His primary interests are tables, lamps, and mirrors. He may be contacted directly or through Theresa Rettig, Foreign Buyer Program, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-3265.

ECUADOR—Gonzalo E. Jacome, Proprietor of Importaciones Y Manufacturas Plastex, P.O. Box 5998, Guayaquil, a variety store, is interested in hearing from suppliers of **costume jewelry, notions, and blue jean fabric.** Jacome planned to arrive in the United States Aug. 29 for a 3-week visit. His U.S. contact address is c/o Mrs. Ella Lecca, 401 Eldert Lane, New York, N.Y. 11208, 212-827-8257. Betty Patrick, 202-377-3265.

COSTA RICA—Carlos Alfaro Suarez of San Jose is interested in purchasing **machinery for manufacture of wheelbarrows.** He may be contacted through Theresa Rettig, 202-377-3265.

SWITZERLAND—Mr. Baumann, Manager of one outlet in a Swiss food chain that supplies institutional food service organizations, restaurants, hotels, and schools, will visit the United States Sept. 15-30 to study **food merchandising methods,** particularly receipt and shelving of stock, point-of-sale operations, cashier operations, and systems for food delivery from outlet to institutional customers. Buyer would like to contact American manufacturers of the latest supermarket equipment, trade associations, wholesale food distributors, and supermarkets to observe housewife/consumer operations. Bill Corfitzen, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-2068.

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